COMPARISON OF EFFICACY OF ONDANSETRON AND PALONOSETRON FOR PREVENTION OF POST SPINAL SHIVERING DURING LOWER LIMB SURGERIES

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Dedicated

to

my family

&

Teachers

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Dr. Deepshikha

LIST OF ABBREVIATIONS

SAB	SUBARACHNOID BLOCK
ECG	ELECTROCARDIOGRAM
NIBP	NON-INVASIVE BLOOD PRESSURE
SpO_2	PERIPHERAL OXYGEN SATURATION
5-HT3	5-HYDROXYTRYPTAMINE SUBTYPE 3 RECEPTOR
iv	INTRAVENOUS
CYP2D6	CYTOCHROME P2D6
mg	MILLIGRAM
mcg	MICROGRAM
PAS	POST-ANAESTHETIC SHIVERING
e.g.	FOR EXAMPLE
μ	MU
κ	KAPPA
d	DELTA
PACU	POST ANESTHESIA CARE UNIT
SBP	SYSTOLIC BLOOD PRESSURE
DBP	DIASTOLIC BLOOD PRESSURE
MAP	MEAN ARTERIAL PRESSURE
HR	HEART RATE
RR	RESPIRATORY RATE
%	PERCENTAGE
min	MINUTES
LSCS	LOWER SEGMENT CESAREAN SECTION
^0C	DEGREE CENTIGRADE
^0F	DEGREE FAHRENHEIT
ASA	AMERICAN SOCIETY OF ANESTHESIOLOGISTS
BMI	BODY MASS INDEX
BT	BLEEDING TIME
CT	CLOTTING TIME
mg	MICROGRAM
G	GUAGE
i.e.	THAT IS
mmHg	MILLIMETER OF MERCURY

OR	OPERATION ROOM
PTI/INR	PROTHROMBIN TIME AND INTERNATIONAL NORMALIZED RATIO
RR	RESPIRATORY RATE
SD	STANDARD DEVIATION
Temp	TEMPERATURE
α	ALPHA
α2	ALPHA-2
γ	GAMMA
FDA	FOOD AND DRUG ADMINISTRATION
Inj	INJECTION
DMT	DUAL MODE THERMOMETER
Cms	CENTIMETER
Kg	KILLOGRAM
Kg/m2	KILOGRAM/SQUARED METER
b/min	BEATS/MINUTE

ABSTRACT

Background: Shivering is a stressful complication after subarachnoid block leading to increase in oxygen consumption and carbon dioxide production, increased chances of myocardial ischemia, infection, bleeding and various consequences. Recently, interest has been evinced in 5-HT3 receptor antagonists for prophylaxis of peri-operative shivering.

Aims & Objective: The aim of the study was to compare the efficacy of prophylactic Ondansetron and Palonosetron in reducing the incidence and severity of post spinal shivering.

Materials & methods:A prospective, double blinded, randomized study was conducted on 210 patients of ASA I-III, aged 18-60 years scheduled for elective lower limb surgeries. The patients were randomly allocated to three groups of 70 each. Group A received Ondansetron 8mg, Group B received Palonosetron 75µg and Group C received normal saline as iv injection 5 minutes before administration of SAB. The hemodynamic parameters, core and peripheral body temperature were monitored. Incidence and severity of shivering were recorded peri-operatively and in PACU (postanesthesia care unit).

Results: A total of 9 patients in group A (12.9%), 16 patients in group B (22.9%) and 30 patients in group C (42.9%) experienced shivering. The incidence of shivering was found to be significantly lower in groups A and B as compared to group C (p-value=0.001). The incidence of shivering in group A was comparable to group B (p-value>0.05). 4.3% patients in group A, 7.2% in group B and 37.1% in group C experienced severe shivering (grade 3 and above). Patients in groups A and B had lower severity of shivering as compared to group C (p-value=0.001, p-value=0.003). The mean dose of tramadol consumption was found to be significantly lower in groups A and B as compared to group C. Group A and B were associated with significantly lower incidence of nausea/vomiting and sedation as compared to group C while hypotension and bradycardia were similar in all the three groups.

Conclusions: The prophylactic iv administration of ondansetron and palonosetron significantly reduces the incidence of shivering in patients undergoing lower limb surgeries under SAB.

Keywords: Ondansetron, Palonosetron, Post-spinal Shivering, prophylaxis, spinal anaesthesia.

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INTRODUCTION

Subarachnoid block (SAB) is commonly used safe and approved anaesthetic technique. Spinal anaesthesia is commonly associated with transient hemodynamic adverse effects like hypotension and bradycardia, which are well recognised complications. However, shivering is also a frequent and significantly distressing problem. Post-spinal anaesthesia shivering has a reported incidence of about 40-60% in patients who undergo surgical procedures under spinal anaesthesia.[1,2]It is pertinent to note that the incidence of shivering during regional anaesthesia is not less than general anaesthesia. Shivering physiologically leads to an increase in oxygen consumption by 200%–600% predisposing to hypoxemia, lactic acidosis and catecholamine release, impeding a smooth recovery from anaesthesia.[2] It also causes increased production of carbon dioxide and may also result in complications like increased chances of myocardial ischemia, infection, increased intraocular pressure, intracranial pressure. Shivering apart from causing psychological stress to the patient, also interferes with patient monitoring such as electrocardiogram (ECG), non-invasive blood pressure (NIBP), and peripheral oxygen saturation (SpO_2).[2,3]

The aetiology of shivering is not clearly understood. The probable mechanism for post spinal shivering is that, regional anaesthesia alters the function of the autonomic nervous system, impairing its role in thermoregulation, thus predisposing patient to hypothermia. Spinal anaesthesia impairs thermoregulation mostly by producing peripheral vasodilatation as a result of the associated sympathetic blockade. This causes increased heat loss through the skin, resulting in a flow of heat from the core to the periphery. Moreover, it also alters central nervous system responses by decreasing vasoconstriction and increasing sweating thresholds.[2] Under regional anaesthesia, both sensory and motor neuronal signals are blocked. The result is that cold sensation signals are not transmitted across sensory spinal nerves. In addition,

motor paralysis below the level of block leads to impaired heat production. Both factors predisposing to hypothermia.[4,5]

The other contributory mechanisms responsible for shivering in patients undergoing surgery are intraoperative heat loss, increased sympathetic tone, pain, and systemic release of pyrogens.[6]

Thus, efforts have been made to reduce the incidence of shivering by employing various prophylactic techniques. Both pharmacological and non-pharmacological methods have been studied for prophylaxis of peri-operative shivering.[7] Non-pharmacological methods include the use of forced warm air blankets, airway heat and moist exchangers and pre-warming.[8]

Pharmacological agents mainly affect the decrease of the shivering temperature threshold. Various agents used for this purpose include pethidine, tramadol, clonidine, and ketamine.[8] These agents, however, have the potential to cause excessive sedation, respiratory depression as well as causing nausea, vomiting and itching. Therefore, search for novel approaches which are bereft of the above-mentioned complications, continues.

Recently, 5-Hydroxytryptamine subtype 3 receptor (5-HT3) antagonists have been found to be effective in reducing the incidence of peri-operative shivering. The advantage of 5-HT3 antagonist is the minimal sedation, lack of dysphoria and extrapyramidal side effects, relative safety profile and simultaneous prophylaxis against post operative nausea and vomiting.[9]

The commonly used 5-HT3 antagonists include ondansetron, palonosetron, granisetron, ramisetron. These agents differ from each other by their relative potency and duration of action.[10] These agents have been individually used for prevention of post operative shivering.[11] Ondansetron is the first 5-HT3 antagonist, used for the prophylaxis due to its lower cost. Time of onset of action for ondansetron is 30 minutes and its elimination half-life is 3-4 hours with

predominantly hepatic metabolism. Overall, 5-HT3 antagonists have good safety profile. The commonly reported minor adverse effects associated with the use of ondansetron are headache and diarrhoea. Uncommon adverse effects like cardiac arrhythmias, conduction disturbances (atrioventricular block) and prolongation of the QTc interval have also been reported after the intravenous (iv) administration of ondansetron.[12] Ondansetron has been most widely evaluated for peri-operative shivering and its efficacy found to be comparable to that of pethidine.[11]

Palonosetron is a second-generation 5-HT3 receptor antagonist with a prolonged duration of action and higher receptor binding affinity than first-generation agents (ondansetron). The mean terminal elimination half-life, following single iv dose, is approximately 40 hours. Palonosetron is eliminated from the body through both renal excretion and metabolic pathways (CYP2D6). The common side effects are headache and constipation. Rare adverse effects include bradycardia and QTc prolongation (<1%).[12]

Since, chemically ondansetron and palonosetron belong to the same class of drugs, both are expected to exert similar effects. However, most studies have reported ondansetron administration to be efficacious for prophylaxis of post spinal shivering, but studies on palonosetron have yielded conflicting results.

Jo et al, in 2013, evaluated the anti-shivering efficacy of palonosetron for patients after gynaecological laparoscopy under total intravenous propofol–remifentanil anaesthesia. 60 female patients were randomly assigned to one of two groups and administered palonosetron 75 mcg (n=30) or the same volume of normal saline (n=30) after anaesthesia induction. They reported that the incidence of shivering was comparable in the control and palonosetron groups (10/30 vs. 8/30, respectively, p-value=0.779) after laparoscopy for gynaecological procedures.[13] This study was conducted in patients receiving intravenous propofol-remifentanil anaesthesia which could have a

confounding effect on the results. Independent risk factors for development of post anaesthesia shivering are laparoscopic surgeries, total intravenous anaesthesia, general anaesthesia and elderly patients, which were present in both groups might have mitigated the effect of palonosetron.[14]Thus, the results of these studies can't be extrapolated to general population.

Jo et al, in 2016, investigated the effects of palonosetron on core hypothermia and the incidence of shivering after laparoscopic cholecystectomy in elderly patients. 48 patients from age group 65 to 80 years were randomly assigned to one of the two groups and administered palonosetron 75 mcg (n=24) or the normal saline (n=24) before anaesthesia induction. Core body temperatures and hemodynamic variables, post-anaesthetic shivering (PAS) and pain scores were obtained. They found that pre-operative administration of palonosetron did not influence perioperative hypothermia or post-anaesthesia shivering in elderly patients undergoing laparoscopic cholecystectomy.[15]

Sharma et al, in 2021, noted that prophylactic administration of palonosetron significantly reduced the incidence of post spinal shivering compared to ondansetron.[14] However, this study included small sample size. The authors suggested a need for further studies with larger sample size and more heterogeneous groups for generalization.

As noted from above mentioned studies, there is disagreement as to whether or not palonosetron is effective in mitigating peri-operative shivering.

The present study was, therefore, designed to compare the efficacy of well established drug ondansetron with a newer drug palonosetron for prophylaxis of post spinal shivering in patients undergoing lower limb surgery under spinal anaesthesia.

AIMS & OBJECTIVES

- To compare the efficacy of prophylactic ondansetron and palonosetron in reducing the incidence and severity of post spinal shivering.
- To study hemodynamic changes and adverse effects, if any.

REVIEW OF LITERATURE

Spinal anaesthesia is a commonly used technique in both elective and emergency surgeries. Shivering is one of the most commonly encountered problems during perioperative period. It is reported in 40%-60% of the patients undergoing surgical interventions under spinal anaesthesia.[1,2]

Though the precise mechanism of shivering is not clear, but the aetiology is probably multifactorial. In homeothermic species, a thermoregulatory system coordinates defenses against cold and heat to maintain internal body temperature within a narrow range. The combination of anaesthetic-induced thermoregulatory impairment and exposure to a cool environment makes most unwarmed surgical patients hypothermic. Shivering is usually triggered by hypothermia. However, it occurs even in normothermic patients during the perioperative period.[16] While cold induced thermoregulatory shivering remains an obvious aetiology owing to cold temperature of operation theatres; rapid infusion of cold iv fluids and effect of cold anaesthetic drugs upon thermosensitive receptors in the spinal cord. The phenomenon has also been attributed to numerous other causes including pain, disinhibited spine reflexes, decreased sympathetic activity, respiratory alkalosis, decrease in core body temperature secondary to sympathetic block; peripheral vasodilation; increased cutaneous blood flow, which leads to increased heat loss through skin.[17] The process of anaesthesia and surgery attenuates normal homeostatic thermoregulation resulting in reduced vasoconstriction & shivering threshold.[18]

Neuronal Networks Controlling Thermoregulation

The lateral spinothalamic tract used to be considered as the sole thermoafferent pathway, leading to the hypothalamic thermoregulatory center. Most of the ascending pathways terminate in the reticular formation. The thermosensitive neurons exist at various regions outside the preoptic-anterior hypothalamus, which include the

ventromedial hypothalamus, the midbrain, the medulla oblongata and the spinal cord. Various inputs from these thermosensitive sites are integrated within the spinal cord and brain, thus provide a coordinated defense response.[2]

The temperature-regulation system is divided into three components. The thermosensors and afferent neural pathways, integration of thermal inputs, and effector pathways for autonomic and behavioural regulation.

Thermosensors and Afferent Neural Pathways

It consists of spinal cord, the extrahypothalamic brain stem & the nucleus raphe magnus and the subcoeruleus area.

Spinal Cord.

The thermosensitivity of spinal cord has the ability to sense and modulate thermal signals. All of the thermoregulatory effector mechanisms are modulated by spinal cord temperature.[2]

The Extrahypothalamic Brain Stem.

Thermosensitive sites are dispersed in the lower brain stem but do not have defined anatomic structures. The peripheral thermal input to the hypothalamic areas is through the reticular areas in the brainstem.[2]

The Nucleus Raphe Magnus and the Subcoeruleus Area.

The nucleus raphe magnus in medulla have a high percentage of serotonergic thermoresponsive neurons. The locus subcoeruleus is defined as a circumscribed area in the pons which is present ventromedial to the locus coeruleus and have the largest cluster of noradrenergic neurons in the brain. These two areas are important relay stations in the transmission of thermal information from skin to hypothalamus. These areas are responsible for the modulation rather than the generation of thermal afferent information.[2]

Integration of Thermal Inputs

The dominant autonomic thermoregulatory control center is the preoptic area of anterior hypothalamus. Apart from thermal regulation,

preoptic-anterior hypothalamus neurons also respond to nonthermal information, e.g., plasma osmolality, glucose concentration, blood pressure, noxious stimuli, carbon dioxide and emotional stimuli. Excitatory input to preoptic-anterior hypothalamus comes from the hippocampus, connecting the limbic system (emotion, memory, and behaviour) to thermoregulatory responses.[2]

The activity in the neurons of preoptic area is affected by arousal state and suprachiasmatic nucleus activity, explaining the association of sleep and circadian rhythms with the changes in body temperature. The warm sensitive neurons in the preoptic-anterior hypothalamus sense core temperature and compare local information with thermal and nonthermal synaptic afferents coming over ascending pathways.[2]

Effector Pathways

Various inputs are then integrated into a common efferent signal to effector systems. The main defenses against the hypothermia include skin vasomotor activity, nonshivering thermogenesis, shivering and sweating.[2]

Thermoregulatory vasoconstriction decreases the cutaneous heat loss and limit metabolic heat to the core thermal compartment. This vasoconstriction prevents body temperature from decreasing the additional 1°C which is required to activate intraoperative shivering. Normal thermoregulatory shivering is a last-resort defense which is activated when behavioural compensations and maximum arteriovenous shunt vasoconstriction are insufficient to maintain core temperature.[2]

Nonshivering thermogenesis is the result of metabolic processes at cellular level, which do not produce mechanical work. Thermoregulatory nonshivering thermogenesis has been demonstrated in the neonate, but its existence in adult humans is uncertain, as it is not observed in anesthetized adults or infants.[2]

Shivering is an involuntary, oscillatory muscular activity that augments metabolic heat production. Vigorous shivering increases metabolic heat production up to 600% above basal level. Shivering is elicited when the preoptic region of the hypothalamus is cooled. The efferent signals which mediate shivering descend in medial forebrain area. The temperature induced changes in neuronal activity of pons and reticular formation exert descending influences on the spinal cord which increase muscle tone.[2]

Spinal α motor neurons are the final common path for both coordinated movement and shivering. During continuous cold stimulation of the skin or the spinal cord, motor neurons are recruited in increasing size, starts from the small γ motor neurons followed by small tonic α motor neurons and at last, the larger phasic α motor neurons.[2]

Shivering is remarkably uncomfortable, unpleasant, and physiologically stressful for the patient undergoing surgery and some patients find the accompanying cold sensation to be worse than surgical pain. Moreover, shivering may aggravate postoperative pain simply by stretching surgical incisions. Shivering also impedes monitoring techniques, increases intraocular and intracranial pressures. Post spinal shivering presents with different degrees ranging from piloerection in the mild form up to generalized skeletal muscle contraction. Though shivering occurs as a thermoregulatory response to hypothermia but it also increases oxygen consumption by 400-500%. Shivering can thus result in oxygen debt and predispose the patient to lactic acidosis.[2] Shivering may be associated with increased adrenergic and sympathetic hyperactivity and subsequent organ dysfunction such as myocardial ischemia in patients with compromised cardiac reserves.[2] These large increases in metabolic requirements might predispose patients with existing intrapulmonary shunts, fixed cardiac output, or limited respiratory reserve to various complications.[2]

Thus, prophylaxis and management of shivering assumes great importance. For prevention and appropriate management of shivering, perioperative temperature measurement is highly desirable. For the purpose of heat distribution in the body, it is divided into two thermal compartments, core and peripheral. To document thermal balance adequately, it is necessary to record both core and peripheral temperatures. Site chosen must be accessible during surgery, convenient, safe and reliable. Various sites of temperature measurement are available- Oesophagus, nasopharynx, rectum, forehead, bladder, tympanic membrane, oral cavity, axilla, muscle, blood, skin surface.[19]

Various pharmacological and non-pharmacological interventions are used for management of perioperative shivering. Non-pharmacological methods include pre- warming, warm iv fluid administration, forced air warming devices and keeping the patient covered all the times.[20]

Non-pharmacological therapy

Non-pharmacological therapy has their utility in many clinical settings where pharmacotherapy can interfere with clinical impact in recovery after anaesthesia, hinder neurologic examinations, and might have an effect on the hemodynamic and neurologic state. Therefore, non-pharmacologic interventions which are commonly used are active cutaneous warming (forced-air warming, electric heating pad/blanket, radiant heating, and water-circulating mattress), body core warming (fluid or gas warming system), passive cutaneous warming (space blankets or towels) and electroacupuncture. These methods work by preserving or restoring the body temperature above the shivering threshold or by masking the central shivering reflex via warmed skin sensory input.[20]

Park et al, in 2015, reviewed 65 publications and analysed non-pharmacologic anti shivering interventions in various clinical settings. The authors found that active cutaneous warming which are forced- air warming, electric heating blanket are better interventions to prevent

shivering in patients undergoing surgery as compared to passive cutaneous warming methods (cotton blanket, elastic bandage) which could not prevent shivering, hence were of limited benefit as anti-shivering interventions.[20]

Cobb et al, in 2016, conducted a double-blinded, randomized controlled trial which enrolled 46 patients undergoing scheduled caesarean delivery under SAB. The patients were randomly assigned to receive either AW (warmed iv fluid and lower body forced-air warmer) or no warming (NW; blankets only). The authors found that fluid combined with forced-air warming is effective in decreasing the incidence of perioperative hypothermia but the incidence of hypothermia (<36^{o}C) was still very high in both groups, and the majority of women became hypothermic and shivering was not prevented.[21]

The mechanism of active cutaneous warming is by increasing body heat content, limiting heat redistribution from the core to periphery and decreasing radiant heat loss which leads to control of thermoregulatory shivering. In addition, surface warming interferes with peripheral input from cutaneous thermoreceptors, which is responsible for approximately 20% of the shivering response. Raising the theatre temperature could prevent shivering but it is insufficient as well.[20]

The use of warmed iv fluid may prevent a decrease in body temperature in the setting of redistribution hypothermia. However, heated fluids limit convective heat loss only when large quantities are infused, which explain the limited effectiveness of this method.[16]

Airway heating with warmed and humidified air can raise nasopharyngeal, oesophageal, and core temperatures by reducing heat loss from respiratory evaporation of dry gases. However, only 10% of heat loss occurs by evaporation, therefore warmed air has little effect on shivering.[20]

The advantage of using forced air warmers is that they are most effective, but they are bulky, costly and coverage area is important. It is known that total body area covered by the device has a significant influence on the effectiveness because greater surface coverage reduces heat loss from exposure and increases heat transfer to the patient.[20] It was observed that the efficacy of forced-air warmers was lower when the forced-air warmers were applied at the lower extremities, below the level of sympathetic inhibition and the best area of application (upper or lower) is still undetermined.[21]

There was a study showing that active forced-air warming device when started preoperatively itself and continued intraoperatively decreased the incidence of shivering[22] A study also recommended necessary time for effective prewarming between 30 and 60 min.[23] However, such long periods of active prewarming for patients before surgery may lead to significant organizational delays in hospitals with higher load. Due to the wide heterogeneity across studies, conclusion regarding the adequate timing and duration of pre-warming could not be drawn. The optimal timing and duration of an intervention is an important factor to maximize the efficacy of non-pharmacological methods. It should also be noted that for major cases, a single warming modality does not completely eliminate the occurrence of accidental peri-operative hypothermia, so combinations may be appropriate. Despite the use of non-pharmacological measures, hypothermia and shivering in peri-operative period is still common, necessitating pharmacological intervention.[7]

Ram et al, in 2019, conducted a study to evaluate the efficacy of intraoperative forced-air warming, ondansetron or their combination in preventing perioperative shivering in 120 patients undergoing elective caesarean section under SAB. The patients were randomly assigned to three groups. Group O received ondansetron 4 mg iv after giving SAB with no forced air warming. Group W received forced-air warming intraoperatively. Group C received ondansetron 4 mg iv after giving

SAB plus intraoperative forced-air warming. Core temperature (tympanic membrane) and the arm skin temperature were measured and shivering was graded simultaneously. The authors found that the incidence of shivering was higher in group W than group C. They concluded that combined use of pharmacological therapy and forced air warming was more effective in reducing the incidence of shivering than forced air warming alone.[24] Hence, the efficacy of warming devices is limited and pharmacological therapy is often required.[24]

Pharmacological Therapy

Various pharmacological agents have been tried for the prevention and treatment of PAS such as centrally acting analgesics (tramadol), opioid receptor agonists (meperidine), cholinesterase inhibitors (physostigmine), and N-methyl-D-aspartate receptor antagonists (ketamine, magnesium sulphate), α_2-central agonists (clonidine, dexmedetomidine), antiserotonergic (ondansetron) and anti-inflammatory drugs (dexamethasone).[20] Owing to temperature modulation, thermal regulation is a complex and multilevel control loop including the participation of thermal receptors, spinal cord, brain stem, anterior hypothalamus and cerebral cortex; thus the targeted antishivering therapy is complicated and has a wide range of medications.

Opioid receptor agonists

Among opioids, meperidine is considered as the gold standard drug for management of PAS. Meperidine is an agonist at both the μ and κ receptors, acting on the central nervous system. The anti-shivering action of meperidine may be partially mediated by κ opioid receptors. It affects body temperature and thermoregulatory responses via its actions on preoptic-anterior hypothalamus neurons, dorsal raphe nucleus neurons, raphe magnus neurons, locus coeruleus and the spinal cord. Opioids exert stimulatory effects on signal transduction, including stimulation of cyclic adenosine monophosphate formation.

Cyclic adenosine monophosphate increases thermosensitivity in warm-sensitive and temperature-insensitive neurons. Thus, meperidine decreases the shivering threshold and is effective in controlling shivering.[2]

Tramadol is a synthetic opioid agonist which prevents shivering by inhibiting the reuptake of norepinephrine and serotonin and activating the descending inhibitory spinal pathways. It also modulates the activity of nucleus median raphe acting centrally on the μ opioid receptors predominately with minimum effects on k and d receptors. The anti-shivering effect of tramadol is considered to be mediated via serotonergic or noradrenergic receptor or both.[25]

Mahesh et al, in 2014, conducted a study to compare the efficacy of tramadol with pethidine for the treatment of shivering, on patients which were posted for elective surgical procedure under SAB. 40 patients were randomly allocated to two groups. Group P (n=20) received pethidine 0.5mg/kg iv and group T (n=20) received tramadol 1.0 mg/kg iv. The authors found that both the drugs were effective in reducing shivering. They also found that pethidine has more side effects like nausea and vomiting, respiratory depression compared to tramadol.[25] Opioids like pethidine has been associated with abuse potential and its non-availability is also associated issue.

Lin et al, in 2017, reviewed 28 trials to evaluate the pros and cons of adjuvant low dose intrathecal meperidine for spinal anaesthesia. The authors found that low dose intrathecal meperidine as an adjuvant for spinal anaesthesia could effectively prevent shivering but with residual concerns for the nausea, vomiting, sedation and respiratory depression.[26]

Alpha-2 agonists

Dexmedetomidine, a centrally acting alpha2-adrenergic agonist, exert its anti-shivering function in hypothalamus and spinal cord. In hypothalamus, there is a high density of alpha2-adrenergic receptors. Alpha2-adrenergic agonists can decrease thermoregulatory threshold

for vasoconstriction and shivering by antagonizing a2- adrenergic receptors.[27]

Mittal et al, in 2014, conducted a randomized study to evaluate and compare the efficacy, hemodynamic and adverse effects of dexmedetomidine with tramadol, for control of PAS. They included 50 ASA Grade I and II patients of either gender, between 18 and 65 years, who were scheduled for various surgical procedures under SAB. The patients were randomised in two groups of 25 patients each to receive either dexmedetomidine 0.5 mcg/kg or tramadol 0.5 mg/kg as a slow intravenous bolus. The authors found that time taken for cessation of shivering was significantly less with dexmedetomidine when compared to tramadol. Nausea and vomiting were observed only in tramadol group and there was not much difference in the sedation profile of both the drugs**.** [28]

Wang et al, in 2020, reviewed six studies to compare the effect of dexmedetomidine versus clonidine for treatment of post spinal anaesthesia shivering. The authors concluded dexmedetomidine has higher incidence of effective rate of shivering treatment, faster control of shivering, lower incidence of recurrent rate but were associated with higher incidence of sedation, hypotension and bradycardia.[27]

N- methyl D- aspartate receptor antagonists

Ketamine is a competitive NMDA receptor antagonist which has been shown to prevent shivering without hemodynamic alteration in patients undergoing regional anaesthesia. Its effects are due to its influence on the hypothalamus and by the beta-adrenergic effect of norepinephrine.[29]

Hidayah et al, in 2014, performed a randomised, double-blind study to compare the effectiveness of iv ketamine and tramadol in the prevention of post spinal shivering. The authors included 150 ASA grade I and II patients, aged between 18 and 70 years, which were posted for elective surgery under spinal anaesthesia. Patients were

randomly allocated to receive either prophylactic iv ketamine 0.5 mg/kg (Group K), iv tramadol 0.5 mg/kg (Group T) or normal saline as control (Group P) after spinal anaesthesia. The authors concluded prophylactic use of iv ketamine significantly reduced the frequency and the intensity of perioperative shivering associated with spinal anaesthesia but also exhibited some side effects of the drug which included behavioural changes, nystagmus.[29]

However, the disadvantage of pethidine, dexmedetomidine, ketamine is sedation as an adverse effect, which can interfere with patient's evaluation in post operative period and has the potential to delay discharge from Post Anaesthesia Care Unit (PACU).[30]

Anti serotonergic agents

More recently, 5-HT3 receptor antagonists which are ondansetron, dolasetron and granisetron, have emerged as means of preventing postoperative shivering.

The mechanism for 5-HT3-receptor antagonists is still unclear. Recent research has shown the presence of 5-HT3 receptors in pre-optic part of anterior hypothalamus. Felberg and Meyers, in 1963, proposed a monoamine thermoregulation theory, according to which, serotonin (5 hydroxy tryptamine), a biological amine found in brain and spinal cord, plays a part in the neurotransmission of shivering. 5-HT3 -receptor antagonists lower the human thermal set range and thereby prevent postanaesthetic shivering by thereby reducing metabolic cold defences and discomfort associated with post anaesthetic hypothermia. Various other studies have also suggested the role of serotonergic system in the pathogenesis of perioperative shivering.[2,31] Thus interest have been evinced in 5-HT3 antagonists, which have been widely used for the prophylaxis and treatment of perioperative nausea and vomiting. These drugs are easily available, have few adverse effects and cause little or no sedation.

Powell et al, in 2000, conducted a double-blinded, placebo-controlled study on 82 patients of age group 18–60 years undergoing orthopaedic, general, or urological surgery under general anaesthesia. Patients were randomized into three groups in this study: Group O4 received ondansetron 4 mg iv, group O8 received ondansetron 8 mg iv and group C received saline iv immediately before the anaesthetic induction. Core (tympanic) and fingertip temperature (dorsum of middle finger) were recorded. The authors compared 2 doses of ondansetron (4mg vs 8mg) with placebo for the prevention of shivering under general anaesthesia and found that 8mg ondansetron was more effective than 4mg in reducing the incidence of shivering.[32]

Kelsaka et al, in 2006, conducted double-blind study on 75 patients ASA grade I and II patients between the ages of 20 to 60 years who were scheduled for elective orthopaedic surgery under spinal anaesthesia were enrolled. The patients were randomized into 3 groups. Group O and group M were given ondansetron 8 mg and meperidine 0.4 mg/kg intravenously immediately before spinal anaesthesia, respectively. Group C received saline at identical times. The authors recorded the core temperatures and the incidence of shivering. The authors found that the core temperature was preserved in both ondansetron and meperidine groups with respect to the control group. They reported shivering in 8% of patients in groups O and M an compared to 36% in group C. They concluded ondansetron and meperidine have similar anti-shivering effects and 8 mg ondansetron is effective to reduce the incidence of shivering in patients undergoing spinal anaesthesia.[33]

Shakya et al, in 2010, conducted a study on 120 patients, who underwent lower abdominal surgeries under spinal anaesthesia. The patients were randomly divided in 3 groups of 40 each who received ketamine 0.25 mg/kg or ondansetron 4 mg iv or saline. The authors recorded temperature and shivering scores every 5 minutes. Incidence of shivering found to be 42.5% in saline group compared to 10% in

ondansetron group and 2.5% in ketamine group.[34]The researchers concluded that prophylactic ondansetron reduced the incidence of shivering as compared to ketamine and placebo.

Tie et al, in 2014, reviewed six trials to evaluate the effect of ondansetron on postoperative shivering when compared with placebo. The authors found ondansetron decreased the extend of postoperative shivering from 49.3% to 23.4%, thus caused significant reduction of PAS. The authors further concluded that ondansetron has a preventive effect on PAS. [31]

Zhou et al, in 2016, reviewed 14 randomized controlled trials to evaluate the efficacy of 5-HT3 receptor antagonists for the prevention of postoperative shivering. The authors found that the incidence of shivering was significantly lower in 5-HT3 groups than placebo groups and there was no significant difference in the incidence of shivering between 5-HT3 groups and meperidine groups. They concluded that 5-HT3 receptor antagonists appear to prevent postoperative shivering, with a broadly comparable efficacy to meperidine.[11]

Nallam et al, in 2017, conducted a study on 80 full term parturient scheduled for elective lower segment caesarean section under spinal anaesthesia. Patients were randomly allocated into two groups. Group O received 8mg/4ml and group S received 4ml normal saline intravenously immediately before induction of spinal anaesthesia. The authors recorded the level of sensory block, core body temperature, shivering score. They concluded that ondansetron 8mg iv is an effective prophylactic means of prevention of PAS during lower segment caesarean section with efficacy against nausea and vomiting and it also reduces hemodynamic changes following spinal anaesthesia.[1]

Botros et al, in 2018, conducted randomized controlled trial on 120 patients allocated equally in three groups. All patients were anaesthetized by SAB for surgical procedure at lower limbs and received one of the study drugs iv according to the group- Group S

patients (placebo) were administered saline, group O (ondansetron) were given 8 mg ondansetron, and group D (dexmedetomidine) were given 1 mcg/kg of dexmedetomidine. The authors recorded incidence of shivering, sedation scores, core body temperature, hemodynamic variables, and incidence of complications like nausea, vomiting, hypotension, bradycardia, over-sedation. The authors found that the incidence of shivering to be 57.5% in group S (placebo) which was significantly higher in comparison to 27.5% in group D (dexmedetomidine) and 17.5% in group O (ondansetron). They concluded prophylactic administrations of ondansetron efficiently decrease the incidence and severity of shivering after spinal anaesthesia than dexmedetomidine and incidence of sedation and sedation scores were significantly higher with group dexmedetomidine.[35]

Sharma et al, in 2018, conducted a double- blinded study on 70 patients scheduled for various surgeries under spinal anaesthesia. The patients were randomly divided into two groups of 35 each to receive either saline (Group S) or ondansetron 8mg (Group O) before spinal anaesthesia. The authors found the incidence of shivering to be 45.7% in saline group, 11.3% in ondansetron group. They reported incidence of hypotension and nausea was more in saline group when compared to ondansetron group. They concluded that prophylactic administration of ondansetron significantly reduced shivering in patients undergoing surgery under spinal anaesthesia.[36]

5-HT3 antagonists have demonstrated definite beneficial role in prevention of PAS and have an established favourable clinical profile and less side effects, such as dizziness, hypotension, etc. Besides their usefulness as antiemetics, their effectiveness in prevention of PAS is being widely explored.

Palonosetron is a 5-HT3 receptor antagonist, newly introduced as a potent, single stereo-isomeric compound, with a fused tricyclic ring system structure attached to a quinuclidine moiety in contrast to first-

generation drugs, which are based on a three-substituted indole structure. Palonosetron has plasma half-life of approximately 40 h, while first generation drugs (ondansetron, granisetron) have half-lives of 5–12 h. The binding affinity of palonosetron to 5-HT3 receptor is also 30 times higher than the older 5-HT3 receptor antagonists.[11,15,37] Owing to its different chemical structure, long plasma half-life and receptor affinity, palonosetron is presumed to interact efficiently at molecular level with 5-HT3 receptors at sites different from or in addition to that of ondansetron and granisetron binding.[15] Palonosetron offers the advantage of requirement of single dosing due to its longer half-life. Palonosetron has not yet been extensively studied for its efficacy on PAS after neuraxial blocks.

Jo et al, in 2013, conducted a prospective, randomized, double-blind study to evaluate the anti-shivering efficacy of palonosetron for patients undergoing laparoscopy for gynaecological procedures under total intravenous propofol–remifentanil anaesthesia. 60 female patients were randomly divided into two groups and were administered palonosetron 75 mcg or the same volume of normal saline immediately after anaesthesia induction. The authors measured oesophageal and index finger temperatures and incidence of postanaesthetic shivering. The incidence of shivering was 10/30 in the control group and 8/30 in palonosetron group (p-value= 0.779). The authors concluded that the use of palonosetron 75 mcg did not reduce the incidence of postanaesthetic shivering after gynaecological laparoscopy under propofol–remifentanil anaesthesia and suggested further study including other 5-HT3 antagonists or male patients to elucidate the effect of palonosetron on shivering after propofol–remifentanil anaesthesia.[13]

Jo et al, in 2016, did a study on effect of prophylactic administration of palonosetron on core hypothermia and incidence of shivering on 48 elderly patients undergoing laparoscopic cholecystectomy under general anaesthesia. The patients were randomly assigned to one of two groups and administered palonosetron 75 mcg or the normal saline

before anaesthesia induction. Core body temperatures and PAS were recorded. The authors found intraoperative core temperature changed significantly over time in the two groups and shivering frequencies were similar in the two groups. They concluded that prophylactic administration of palonosetron did not influence perioperative hypothermia or post-anaesthesia shivering in elderly patients undergoing laparoscopic cholecystectomy.[15]

Sharma et al, in 2021, did a randomized, double-blinded study to compare the efficacy of prophylactic administration of ondansetron and palonosetron in preventing PAS in patients undergoing elective lower segment caesarean section under spinal anaesthesia. A total of 84 patients were randomly allocated to one of the two study groups (Group O & P) and accordingly 8 mg ondansetron or 75 mcg palonosetron was administered. It was found that incidence of shivering was 23.8% patients (10/42) in O group as compared to 9.5% in P group (4/42), which was statistically significant. They concluded prophylactic administration of palonosetron significantly reduced incidence of PAS compared to ondansetron and suggested further studies with larger sample size.[14]

This was an unexpected finding since palonosetron and ondansetron have a similar mechanism of action. Palonosetron being longer acting than ondansetron. Existing data on effect of palonosetron on PAS after spinal anaesthesia are scarce. However, beneficial effects of 5-HT3 receptor antagonists are apparently more obvious with neuraxial blocks.

MATERIAL AND METHODS

SOURCE OF DATA

The study was conducted in a randomized double-blinded manner in the department of Anaesthesiology, Dayanand Medical College and Hospital, Ludhiana after approval from the hospital ethics committee.

METHOD OF COLLECTION OF DATA

Inclusion Criteria

210 patients of either sex, aged 18 to 60 years belonging to American Society of Anaesthesiologists (ASA) grade 1-3, scheduled for elective lower limb surgeries under spinal anaesthesia were included in this prospective, randomized, double blinded study. A written informed consent was obtained from all the patients.

A total of 210 patients enrolled for the study were randomly allocated to any of the three groups of 70 patients each.

Group A – patients received iv ondansetron 8 mg, 5 minutes before spinal anaesthesia.

Group B – patients received iv palonosetron 75 µg, 5 minutes before spinal anaesthesia.

Group C – patients received iv normal saline (placebo), 5 minutes before spinal anaesthesia.

Exclusion Criterion

- Failed spinal anaesthesia.
- Prolonged surgical time leading to supplement/ conversion to general anaesthesia.
- Coagulopathy PTI/INR >1.5 or platelet count less than 1 lakh/µL.
- Patient needing blood transfusion.
- Parkinson’s disease.
- Patient with known endocrine disease.
- Diabetic autonomic neuropathy.
- Patients having any dysrhythmias on pre-operative ECG.

- Known hypersensitivity to any of the drugs used in the study.

PRE ANAESTHETIC CHECKUP

All patients underwent a thorough pre-anaesthesia evaluation. Complete blood count (CBC), renal function tests, random blood glucose levels, prothrombin time (PT), activated partial thromboplastin time (aPTT), Prothrombin index and international normalized ratio (PTI/INR), ECG and Chest X-ray were performed for all patients. A written informed consent was obtained from all the patients.

ANAESTHESIA TECHNIQUE

All patients were kept nil per orally to solids for 8 hours while clear fluids were allowed upto 2 hours prior to surgery and pre-medicated with Tab. alprazolam 0.5 mg administered orally at bed time on the night prior to surgery. In the operating room (OR), an intravenous (iv) access was secured using 18 G or 20 G iv cannula. Standard monitoring in the form of Electrocardiogram (ECG), Non-invasive blood pressure (NIBP), oxygen saturation (SpO2) were carried out.

Baseline hemodynamic parameters including heart rate (HR), systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial pressure (MAP), respiratory rate (RR), oxygen saturation (SpO_2) and skin and core and peripheral temperature were recorded. Peripheral temperature was recorded from axilla, whereas core body temperature was recorded from tympanic membrane using FDA approved infra-red professional thermometer i check DMT (dual mode thermometer)-601; accuracy range ± 0.4^0 F, Nureca Inc., USA.

For all patients, the OR temperature was recorded and maintained at 22± 1°C and constant humidity (60%). No means of active re-warming were used as preventive measure. Patients were covered with surgical drapes; chest and limbs of patient were covered using cotton sheets. The intravenous fluids administered and irrigation fluids used were at room temperature.

The study drug was administered intravenously 5 minutes before the administration of sub-arachnoid block as per random numbers. The

study drug was diluted to make a total volume of 10 ml and administered by an anaesthesiologist who did not participate further in the study. The anaesthesiologist observed the patient in OR and post anaesthesia care unit (PACU) was blinded to the study drug administered.

SAB was administered under all aseptic precautions using 3 ml of 0.5% heavy bupivacaine in sitting position, with a 26 gauge Quincke's needle in L3-4 or L4-5 inter-vertebral space. Following the block, patient was placed in supine position. Level of sensory block was assessed by loss of sensation to pinprick in the anterior axillary line. Highest level of sensory blockade was taken as the level achieved 20 minutes after administration of intrathecal bupivacaine and that was recorded. Duration of spinal anaesthesia was defined as regression of sensory block to L1 dermatomal level.

All patients were administered oxygen at rate of 5 litres/ minute via face mask. HR, SBP, DBP, MAP, SpO_2 and respiratory rate were observed after placing the patients in supine position (0 minute) and every 5 minutes for the duration of surgery. Core and peripheral temperature were measured every 30 min.

Any episode of bradycardia (defined as HR<50beats/min) was treated with atropine 0.6mg iv and recorded.

Any episode of hypotension (defined as decrease in SBP <90 mm Hg or 20% less than baseline value) was treated with ephedrine iv 6mg in titrated doses and recorded.

At the end of procedure, patients were shifted to PACU, where they were monitored every 30 minutes till 6 hours. Intra-operatively and in PACU, patients were continuously observed for any episode of shivering, which was graded as per Wrench. (Appendix Table 1)

Time of onset of shivering was recorded. Patients who had shivering grade 1 or 2 were managed by standard treatment which included oxygen administration and a warming blanket. Patients who had shivering Grade 3 and 4 consistent for more than 15 minutes were considered as ineffective prophylaxis and rescue drug Inj. Tramadol 50 mg iv bolus was administered. If patient complained of shivering after

20 minutes, a repeat dose of rescue drug Inj. Tramadol 50 mg iv was given subject to a maximum of 200mg in 6 hours. The anaesthesiologist also recorded the time for disappearance of shivering after rescue treatment.

Adverse effects like nausea, vomiting, hypotension, bradycardia and sedation were recorded. Sedation score was assessed with Modified observer's assessment of alertness/sedation scale (MOSS/A). (Appendix Table 2)

OUTCOME:

Comparison of the efficacy of ondansetron and palonosetron for prophylaxis of perioperative shivering under spinal anesthesia, in terms of incidence and severity of shivering, need for rescue treatment and any adverse effects.

STATISTICAL ANALYSIS

Data was described in terms of range; mean ± standard deviation (± SD), median, frequencies (number of cases) and relative frequencies (percentages) as appropriate. Comparison of quantitative variables between the study groups were done using ANOVA test. For comparing categorical data, Chi square ($\chi 2$) test was performed and exact test was used when the expected frequency is less than 5. A probability value (p value) less than 0.05 was considered statistically significant.

By using previous study [15] the incidence of shivering is 35% in placebo, 11% in ondansetron and 21% in palonosetron. Based on this assumption

The formula used in the situation is as under:

$$n = \frac{[Z_{1-\alpha/2}\sqrt{2\,P\,(1-P)} + Z_{1-\beta}.\sqrt{\{P1(1-P1) + P2\,(1-P2)\}}]^2}{(P1-P2)^2}$$

Where P=(P1+P2)/2

Approximate value of efficacy/cure rate for standard treatment =P1

Approximate value of efficacy/cure rate for other treatment = P2

Effect size = (P2-P1)

Level of significance (usually 5%)

Zα = Value of standard normal variate corresponding to α level of significance (1.96)

Zβ = The standard normal deviate for desired power(0.842)

With the above assumptions the sample size for 95% confidence level & 80% power works out 65 in each group.

OBSERVATION AND RESULTS

The present study was conducted in Department of Anaesthesiology, Dayanand Medical College and Hospital, Ludhiana in 210 patients of either sex, aged 18 to 60 years belonging to ASA grade I-III, scheduled for elective lower limb surgeries under spinal anaesthesia.

Patients enrolled for the study were randomly allocated to any of the three groups of 70 patients each according to computer generated random numbers.

Group A – patients received iv ondansetron 8 mg, 5 minutes before spinal anaesthesia.

Group B – patients received iv palonosetron 75 µg, 5 minutes before spinal anaesthesia.

Group C – patients received iv normal saline (placebo), 5 minutes before spinal anaesthesia

1(a): Distribution of subjects according to age

In group A, mean age was 40.89 ±11.43 years, in group B mean age was 37.29±12.89 years and in group C mean age was 38.19±12.90 years. There was no statistically significant difference among the groups with respect to age (p-value>0.05).

Table 1(a): Distribution of subjects according to age

	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
Age (years)	40.89	11.43	37.29	12.89	38.19	12.90	1.592	0.206	0.088	0.200	0.669

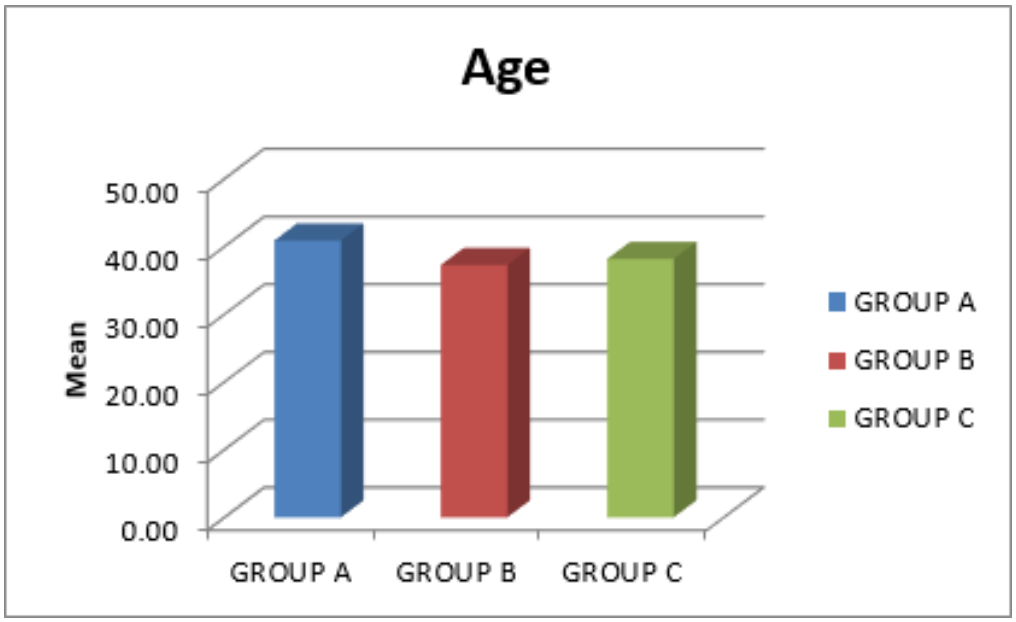


Figure 1(a): Distribution of subjects according to age

1(b): Distribution of subjects according to height, weight and BMI

In group A, mean height was 167.80±7.81 cms, in group B and group C, height was 166.26±7.26 cms and 167±6.94 cms respectively. The mean body weight in group A, B and C was 74.01±11.42 kg, 74.60±11.99 kg and 74.71±13.79 kg respectively. In group A, BMI was 26.42±4.58 kg/m2, the BMI in group B and group C was 27.00±4.58 kg/m2 and 26.82±4.98 kg/m2 respectively. All the groups were comparable with respect to height, weight and BMI (p-value>0.05).

Table 1(b):Distribution of subjects according to height, weight and BMI

	GROUP A		**GROUP B**		**GROUP C**		**F**	**p-value**	**A VS B**	**A VS C**	**B VS C**
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**			**p-value**	**p-value**	**p-value**
Height (Cms)	167.80	7.81	166.26	7.26	167.07	6.94	0.774	0.463	0.215	0.558	0.512
Weight (kg)	74.01	11.42	74.60	11.99	74.71	13.79	0.064	0.938	0.781	0.740	0.957
BMI (kg/m2)	26.42	4.58	27.00	4.14	26.82	4.98	0.295	0.745	0.455	0.602	0.821

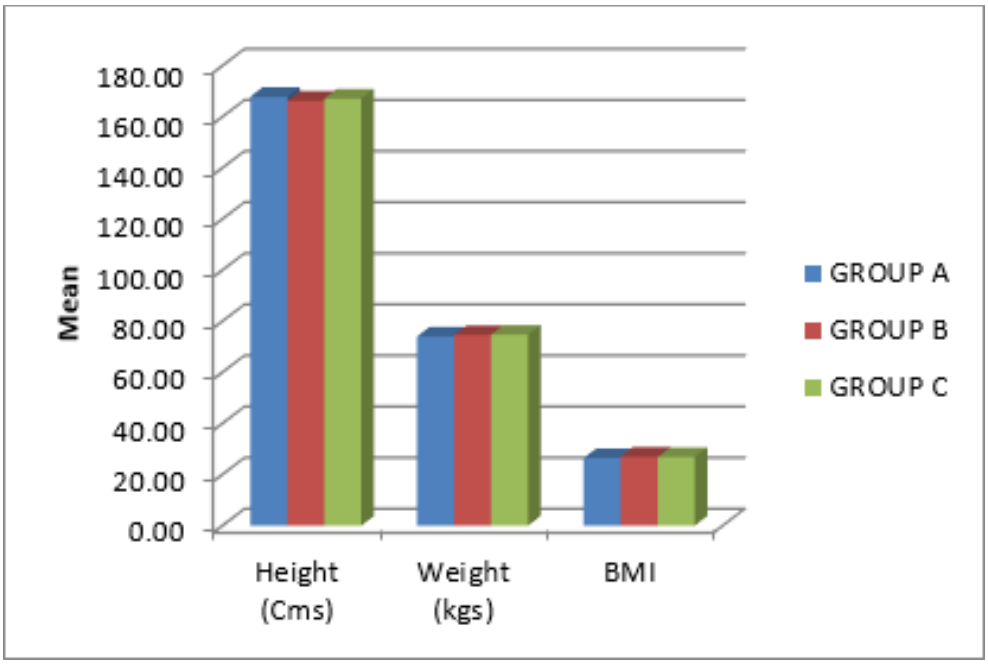


Figure 1(b): Distribution of subjects according to height, weight and BMI

1(c): Distribution of subjects according to gender

There were more males in each group than females; however the gender distribution across the groups was comparable. (P-value>0.05)

Table 1(c): Distribution of subjects according to gender

		GROUP A		GROUP B		GROUP C		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age	No. of cases	%age			
Gender	F	10	14.3%	16	22.9%	10	14.3%	42	2.414	0.299
	M	60	85.7%	54	77.1%	60	85.7%	168		

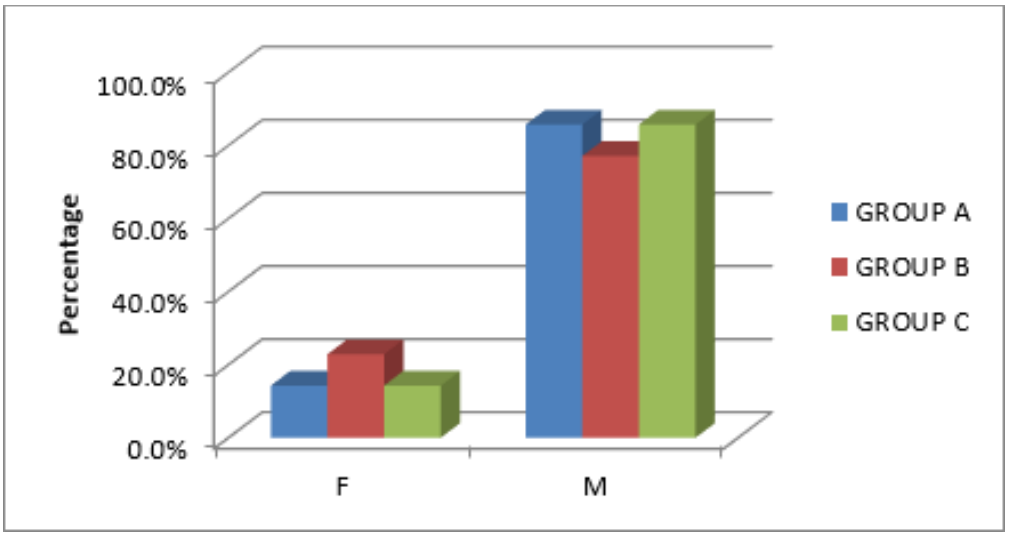


Figure 1(c): Distribution of subjects according to gender

2) Distribution of subjects according to ASA grade

The difference in ASA distribution in all the three groups was statistically non-significant. Majority of the patients belonged to ASA II, however, their distribution amongst the three groups were comparable. (P-value>0.05)

Table 2: Distribution of subjects according to ASA grade

		GROUP A		GROUP B		GROUP C		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age	No. of cases	%age			
ASA Grading	I	16	22.9%	25	35.7%	17	24.3%	58	6.363	0.174
	II	40	57.1%	36	51.4%	46	65.7%	122		
	III	14	20.0%	9	12.9%	7	10.0%	30		

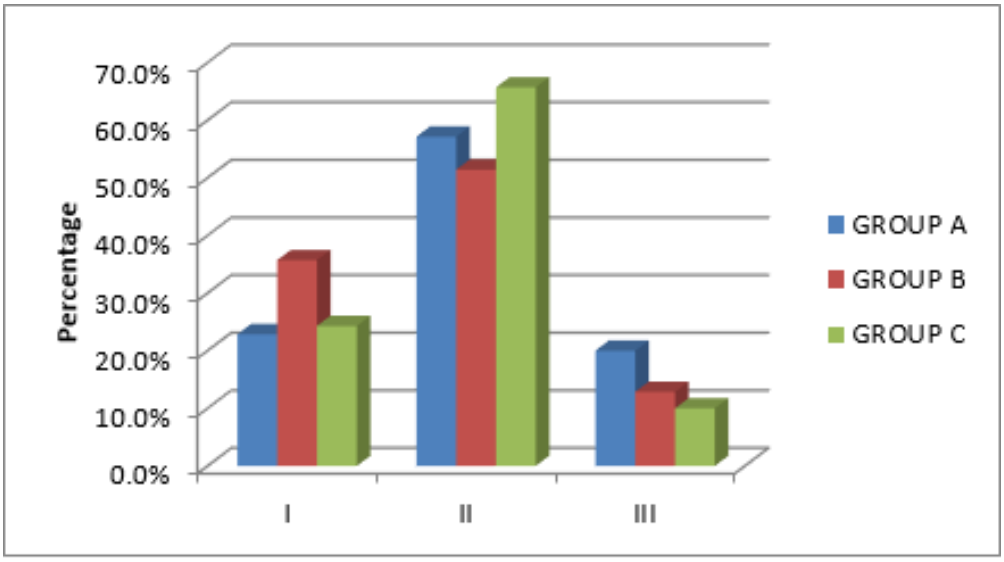


Figure 2: Distribution of subjects according to ASA grade

3. Distribution of the operating room temperature, duration of surgery and duration of anaesthesia amongst the three groups

The mean operating room temperature was comparable for each group. The range of OR temperature for all three groups was 21-23°C. Groups A, B and C had mean OR temperature of 21.77±0.68°C, 21.70±0.71°C and 21.71±0.66°C respectively. There was no statistically significant difference among all the three groups (p value= 0.809). Duration of surgery and duration of spinal anaesthesia were comparable in all three groups (p-value=0.763 and p-value=0.804, respectively)

Table 3: Operating room temperature, duration of surgery and duration of anaesthesia.

	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
Operating room temperature (°C)	21.77	0.68	21.70	0.71	21.71	0.66	0.213	0.809	0.538	0.623	0.902
Duration of surgery (minutes)	83.71	27.59	85.71	25.64	89.50	30.96	0.763	0.468	0.675	0.225	0.427
Duration of spinal anaesthesia (minutes)	177.00	14.48	177.14	12.53	179.43	10.89	0.804	0.449	0.947	0.260	0.289

Figure 3 (a): Operating room temperature

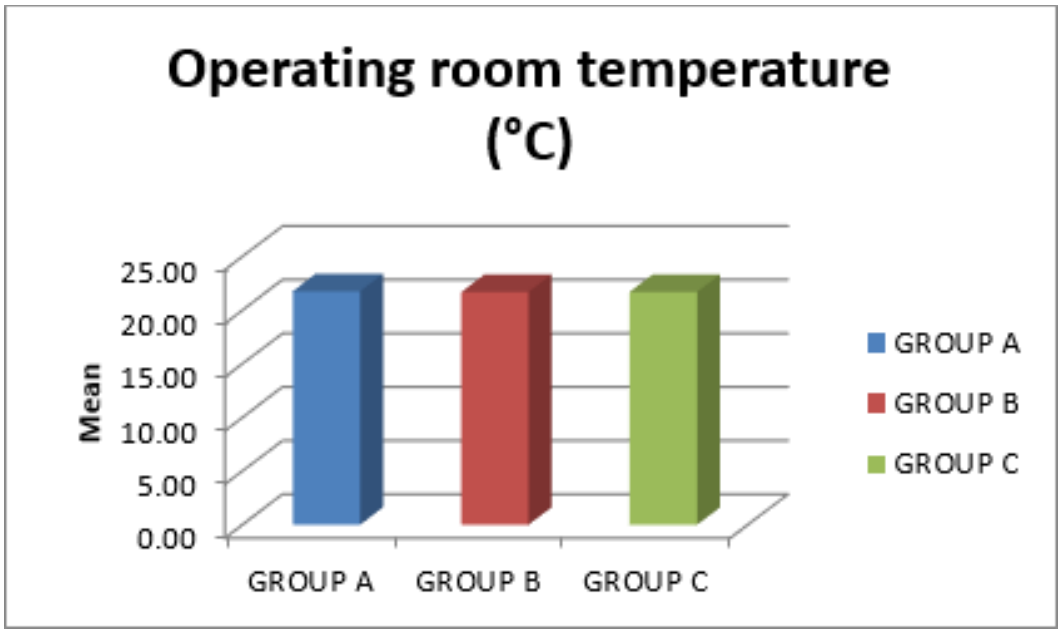


Figure 3(b): Duration of surgery

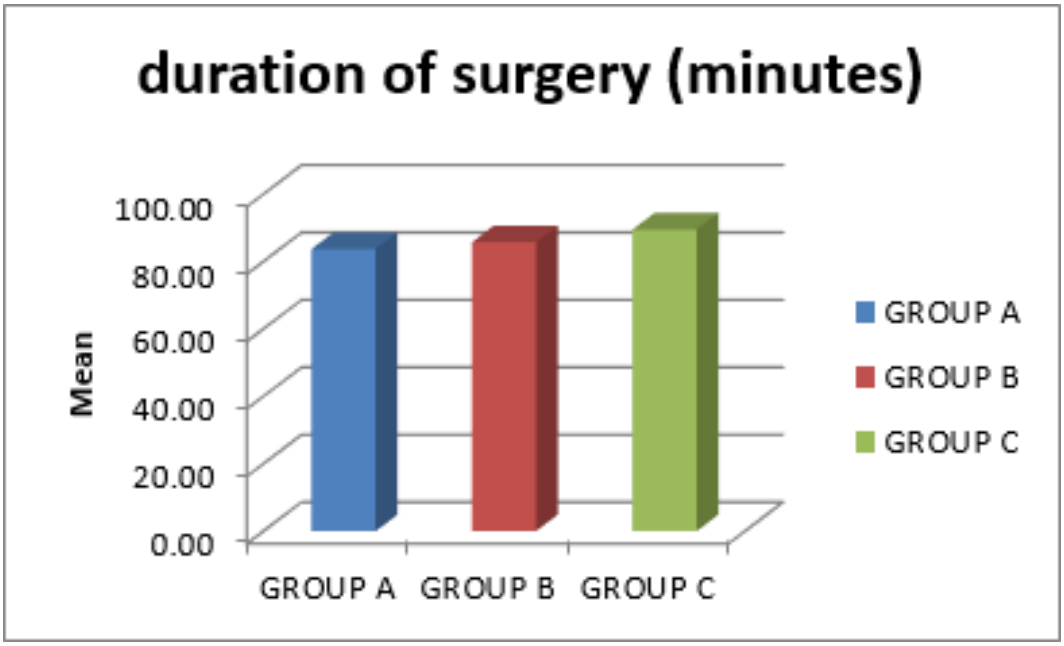
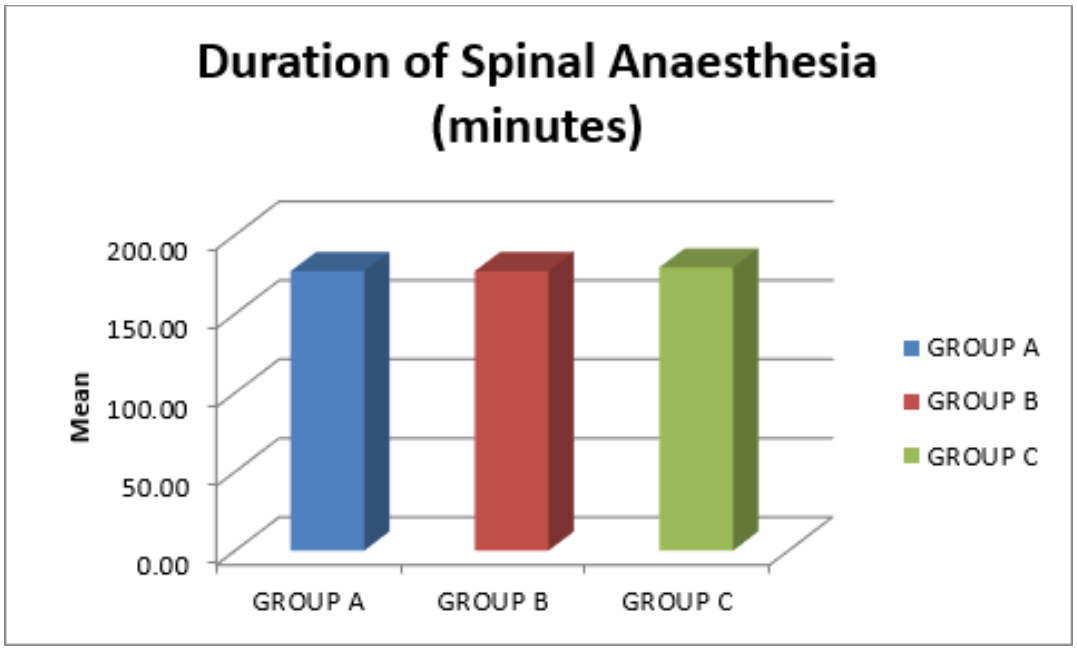


Figure 3(c): Duration of spinal anaesthesia



4. Distribution of subjects according to highest dermatomal level achieved amongst three groups

The highest dermatomal level was T6 in 12.9%, 12.9% and 8.6% of patients in group A, B and C respectively. However, majority of patients had T8 as highest dermatomal level, but their distribution among the three groups were comparable. The difference in dermatomal level distribution was statistically insignificant. (p-value= 0.061)

Table 4:Distribution of subjects according to highest dermatomal level achieved amongst three groups

		GROUP A		GROUP B		GROUP C		Total	Chi-square value	p-value
		No. of cases	%age	No. of cases	%age	No. of cases	%age			
Highest dermatomal level	T6	9	12.9%	9	12.9%	6	8.6%	24	9.005	0.061
	T8	32	45.7%	46	65.7%	35	50.0%	113		
	T10	29	41.4%	15	21.4%	29	41.4%	73		

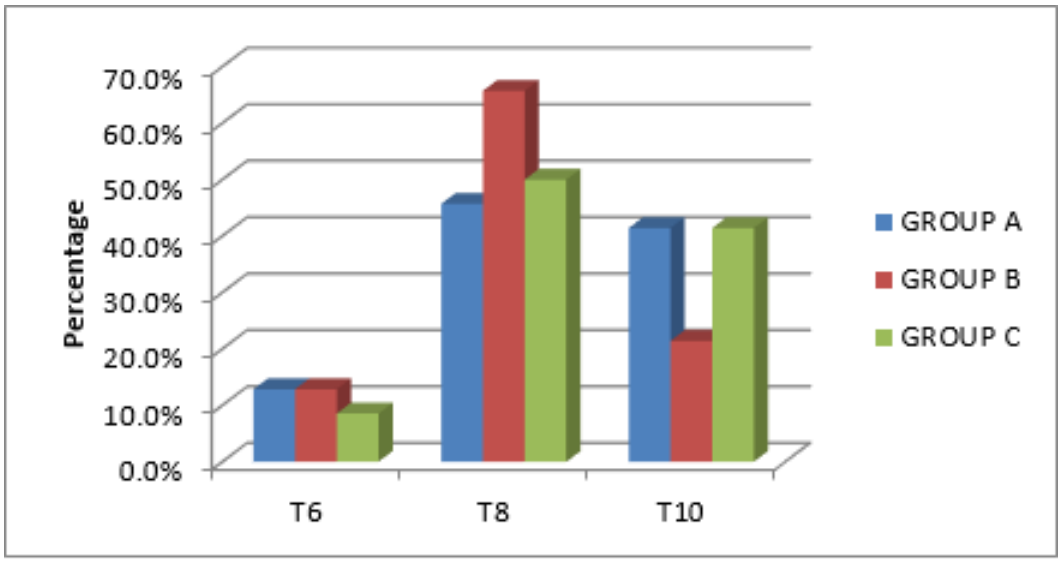


Figure 4: Distribution of subjects according to highest dermatomal level achieved amongst three group

5. Intraoperative trends in mean heart rate amongst the three groups

The mean baseline heart rate was 88.64±15.15 b/min, 88.49±14.56 b/min and 92.17± 15.20 b/min in groups A, B and C respectively. No statistically significant difference in mean baseline heart rate was observed in all the three groups (p-value = 0.260). There was slight decline in mean HR over the time in all three groups after SAB. The difference in mean heart rate was statistically non-significant at all time intervals during observation.

Table 5: Intraoperative trends in mean heart rate amongst the three groups

HR (b/min)_Time(min)	**GROUP A**		**GROUP B**		**GROUP C**		**F**	**p-value**	**A VS B**	**A VS C**	**B VS C**
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**			**p-value**	**p-value**	**p-value**
HR (Baseline)	88.64	15.15	88.49	14.56	92.17	15.20	1.356	0.260	0.951	0.165	0.147
HR _0 min	90.43	14.31	90.67	14.26	93.69	14.11	1.139	0.322	0.920	0.920	0.211
HR_5	88.30	15.01	89.11	14.46	91.29	15.00	0.759	0.469	0.746	0.235	0.387
HR_10	87.66	15.42	88.87	14.15	89.94	15.28	0.409	0.665	0.632	0.367	0.672
HR_15	86.23	15.23	88.13	13.90	88.34	15.65	0.424	0.655	0.453	0.404	0.932
HR_20	85.37	15.56	87.27	13.63	86.29	14.85	0.292	0.747	0.445	0.713	0.692
HR_25	84.53	15.37	85.89	13.55	85.43	15.76	0.150	0.861	0.591	0.722	0.856
HR_30	83.19	15.74	85.64	13.52	84.99	14.78	0.524	0.593	0.324	0.470	0.792

HR_35	83.31	15.71	85.50	13.70	84.57	14.70	0.388	0.679	0.381	0.614	0.709
HR_40	82.26	15.91	85.23	13.74	83.50	14.73	0.710	0.493	0.237	0.620	0.491
HR_45	81.44	15.81	83.31	13.76	83.90	14.91	0.523	0.594	0.457	0.329	0.816
HR_50	83.92	15.46	83.06	13.56	83.35	15.42	0.055	0.946	0.745	0.827	0.915
HR_55	82.94	15.33	83.29	13.55	83.93	14.73	0.075	0.928	0.892	0.702	0.807
HR_60	82.94	15.19	84.13	12.86	83.52	14.03	0.113	0.893	0.634	0.816	0.812
HR_65	80.05	16.77	84.18	12.70	80.98	12.66	1.099	0.336	0.170	0.764	0.270
HR_70	79.82	16.26	82.76	12.91	81.39	12.87	0.486	0.616	0.326	0.611	0.635
HR_75	80.79	16.68	83.36	13.01	81.16	13.07	0.424	0.655	0.408	0.907	0.461
HR_80	80.78	16.47	83.08	13.49	81.70	12.98	0.250	0.779	0.485	0.780	0.669
HR _85	83.65	17.10	85.28	13.21	83.30	14.51	0.197	0.821	0.635	0.919	0.556
HR_90	81.76	16.51	84.88	12.79	81.43	13.76	0.694	0.501	0.344	0.920	0.286
HR_95	83.84	17.77	83.18	14.82	81.09	14.81	0.220	0.803	0.893	0.546	0.631
HR_100	82.68	18.39	83.23	14.88	80.34	14.21	0.262	0.770	0.912	0.606	0.506
HR_105	82.21	19.44	84.36	15.38	82.52	13.26	0.121	0.886	0.663	0.947	0.675
HR _110	82.71	18.00	86.00	14.73	80.05	12.30	0.736	0.484	0.530	0.584	0.231
HR_115	82.71	17.05	85.69	15.43	79.32	13.24	0.833	0.440	0.574	0.491	0.206
HR_120	79.94	16.28	84.81	15.21	78.77	12.41	0.856	0.431	0.339	0.804	0.211

HR_125	69.00	7.07	86.00	.	83.33	7.58	3.049	0.122			
HR_130	71.00	7.07	84.00	.	86.40	5.55	4.941	0.065			
HR_135	68.50	4.95	85.00	.	83.60	6.39	4.719	0.071			
HR_140	71.00	7.07	.	.	88.00	6.93	7.126	0.076			
HR_145	69.00	4.24	.	.	83.33	11.02	2.837	0.191			
HR_150	69.50	6.36	.	.	83.33	8.08	4.025	0.138			

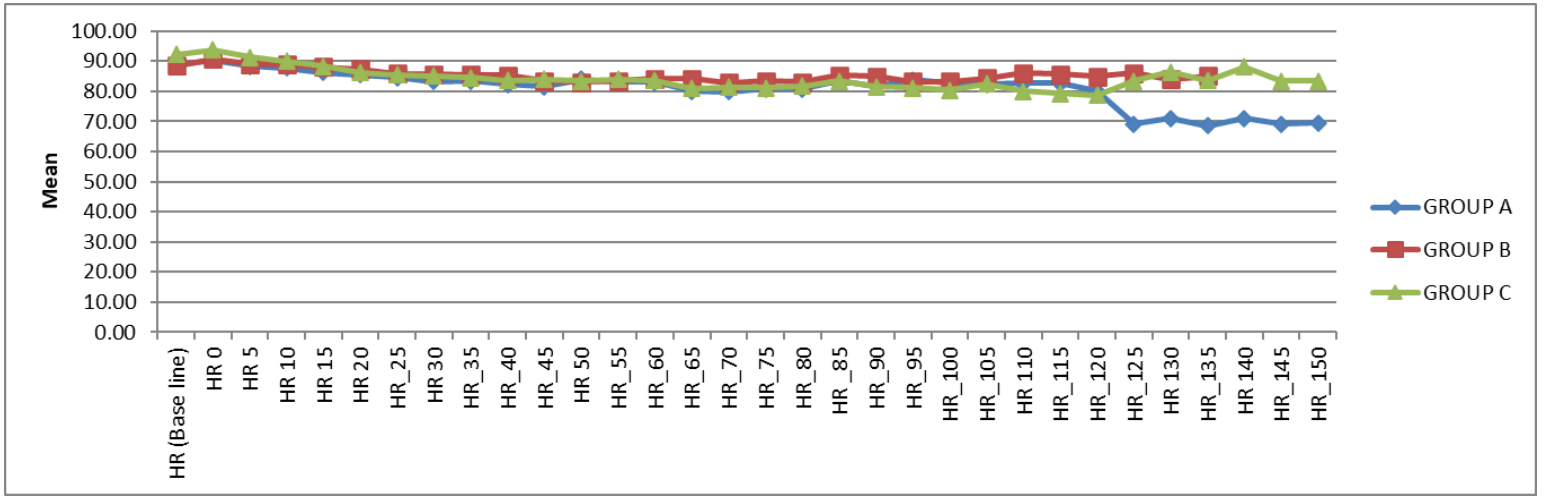


Figure 5: Intraoperative trends in mean heart rate amongst the three groups.

6. Intraoperative trends in mean systolic blood pressure amongst the three groups

The mean baseline systolic blood pressure (SBP) was 137.98±20.92 mmHg, 133.76±17.71mmHg and 139.85±17.94 mm Hg in group A, B and C respectively. The difference in mean baseline SBP was statistically insignificant (p-value= 0.530). However, there was slight decrease in SBP over time in all three groups after SAB. The difference in mean SBP was statistically insignificant at all observed time intervals. (P-value>0.05)

Table 6: Intraoperative trends in mean systolic blood pressure amongst the three groups

SBP (mmHg)_ Time(min)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
SBP_Baseline	137.34	20.92	133.76	17.71	135.89	17.94	0.636	0.530	0.263	0.649	0.506
SBP_0	132.83	16.58	130.40	16.41	134.57	16.42	1.133	0.324	0.384	0.532	0.136
SBP_5	124.69	18.70	124.14	16.67	128.01	15.89	1.048	0.352	0.851	0.252	0.183
SBP_10	121.33	18.03	121.36	17.63	121.90	15.49	0.025	0.975	0.992	0.843	0.851
SBP_15	120.53	15.82	120.87	14.21	121.06	14.86	0.022	0.978	0.892	0.835	0.942
SBP_20	121.80	15.82	121.13	13.89	122.06	14.98	0.072	0.930	0.790	0.919	0.713
SBP_25	122.47	15.78	122.86	12.73	123.87	15.46	0.169	0.845	0.877	0.574	0.684
SBP_30	122.89	15.63	123.50	13.40	123.63	15.72	0.049	0.952	0.808	0.769	0.959

SBP_35	123.80	15.41	123.71	13.70	123.99	16.35	0.006	0.994	0.973	0.942	0.916
SBP_40	123.81	15.44	123.97	12.84	124.37	17.04	0.025	0.975	0.951	0.829	0.876
SBP_45	123.81	15.41	123.46	13.68	124.36	17.16	0.060	0.942	0.892	0.836	0.731
SBP_50	123.94	15.23	124.37	14.56	124.70	16.04	0.040	0.961	0.874	0.779	0.905
SBP_55	124.12	15.73	125.03	15.50	124.16	16.05	0.066	0.936	0.746	0.988	0.760
SBP_60	124.75	16.47	125.97	17.19	125.16	15.46	0.090	0.914	0.677	0.889	0.786
SBP_65	124.00	13.61	125.54	15.62	124.30	14.57	0.142	0.868	0.625	0.927	0.683
SBP_70	124.23	14.74	124.60	15.18	123.48	16.92	0.062	0.940	0.912	0.827	0.729
SBP_75	121.42	15.39	123.87	13.47	122.52	16.18	0.285	0.753	0.455	0.741	0.669
SBP_80	121.65	15.55	122.88	12.62	123.55	17.51	0.151	0.860	0.727	0.588	0.844
SBP_85	121.49	15.59	123.25	12.15	122.85	18.35	0.134	0.875	0.620	0.702	0.909
SBP_90	120.92	15.86	122.13	12.46	123.55	18.37	0.270	0.764	0.738	0.465	0.686
SBP_95	127.05	17.10	123.23	14.89	122.84	17.39	0.422	0.657	0.464	0.384	0.934
SBP_100	126.32	15.74	123.05	16.80	124.22	17.85	0.192	0.826	0.541	0.672	0.804
SBP_105	126.68	17.25	123.32	15.93	123.13	14.89	0.337	0.715	0.500	0.444	0.966
SBP_110	126.35	14.06	122.94	15.99	125.32	14.96	0.225	0.799	0.516	0.832	0.631
SBP_115	126.24	13.25	122.44	16.49	124.00	18.08	0.229	0.796	0.506	0.672	0.771
SBP_120	122.47	14.74	119.75	14.71	124.55	15.52	0.470	0.627	0.606	0.671	0.337

SBP_125	116.00	0.00	124.00		116.57	16.20	0.115	0.893			
SBP_130	117.00	4.24	126.00		119.00	15.97	0.130	0.881			
SBP_135	117.00	12.73	124.00		120.67	13.60	0.100	0.906			
SBP_140	115.00	12.73	.	.	112.33	18.82	0.029	0.875			
SBP_145	115.50	7.78	.	.	114.33	15.31	0.009	0.929			
SBP_150	116.00	0.00	.	.	114.00	19.29	0.019	0.898			

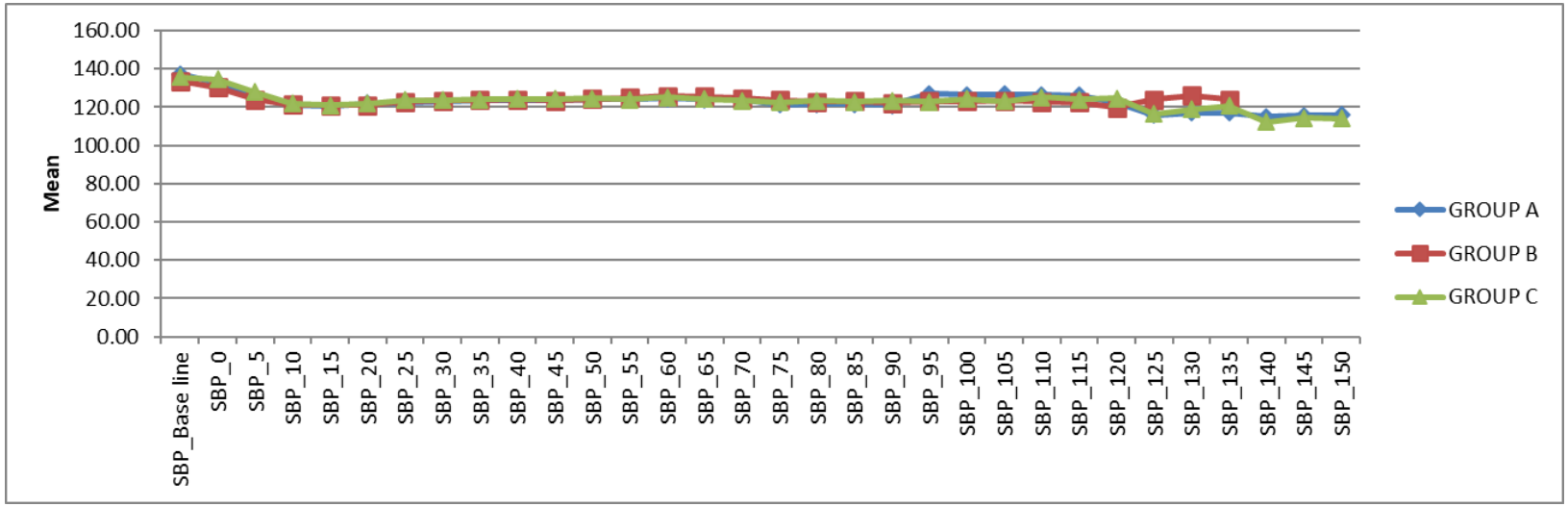


Figure 6: Intraoperative trends in mean systolic blood pressure amongst the three groups

7. Intraoperative trends in mean diastolic blood pressure amongst the three groups

The mean baseline diastolic blood pressure (DBP) was 83.60±9.24 mmHg, 83.94±9.53 mmHg and 83.11±10.29 mm Hg in group A, B and C respectively. The difference in mean baseline DBP was statistically non-significant (p-value= 0.879). There is a slight declining trend of DBP over time in all the three groups after SAB. The difference in mean DBP among the three groups was statistically insignificant at all time intervals over the period of observation (p-value>0.05).

Table 7: Intraoperative trends in mean diastolic blood pressure amongst the three groups

DBP (mmHg)_ Time(min)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
DBP_Baseline	83.60	9.24	83.94	9.53	83.11	10.29	0.129	0.879	0.835	0.767	0.614
DBP_0	81.77	12.38	81.74	10.25	82.41	12.38	0.074	0.929	0.988	0.746	0.735
DBP_5	75.96	12.68	77.01	11.17	78.11	12.42	0.555	0.575	0.606	0.293	0.592
DBP_10	73.04	11.95	73.67	12.21	74.99	11.19	0.495	0.610	0.753	0.331	0.510
DBP_15	73.03	10.68	72.97	10.60	73.70	10.74	0.101	0.904	0.975	0.710	0.687
DBP_20	71.71	11.30	72.40	10.21	73.24	11.94	0.329	0.720	0.717	0.419	0.656
DBP_25	72.14	11.50	73.93	10.22	74.27	12.32	0.706	0.495	0.354	0.270	0.859
DBP_30	73.81	11.00	74.67	9.59	75.81	10.82	0.640	0.528	0.629	0.261	0.520

DBP_35	73.89	11.33	75.73	9.71	75.46	12.45	0.551	0.577	0.332	0.408	0.886
DBP_40	74.19	11.55	76.14	9.29	76.40	12.74	0.806	0.448	0.306	0.247	0.893
DBP_45	74.90	11.39	76.79	10.27	76.53	12.53	0.560	0.572	0.330	0.400	0.894
DBP_50	75.31	11.39	77.03	9.51	77.08	11.81	0.544	0.581	0.377	0.362	0.981
DBP_55	75.02	11.04	76.55	11.49	76.34	11.60	0.342	0.711	0.449	0.513	0.921
DBP_60	74.65	10.76	78.11	11.38	76.90	11.03	1.613	0.202	0.079	0.254	0.544
DBP_65	75.46	11.96	77.84	11.18	76.50	12.80	0.442	0.644	0.354	0.694	0.589
DBP_70	72.26	11.31	74.74	12.47	74.80	12.20	0.598	0.552	0.337	0.340	0.982
DBP_75	72.34	9.85	73.45	10.61	72.77	11.02	0.120	0.887	0.632	0.854	0.761
DBP_80	70.24	11.43	72.90	10.07	72.08	11.42	0.585	0.559	0.291	0.466	0.738
DBP_85	70.59	10.96	73.73	9.66	72.38	12.29	0.778	0.462	0.216	0.480	0.585
DBP_90	71.65	10.98	74.50	9.35	74.30	10.73	0.896	0.411	0.230	0.264	0.931
DBP_95	75.32	12.86	73.77	7.53	72.53	13.06	0.345	0.710	0.673	0.411	0.701
DBP_100	75.68	13.34	74.64	8.92	73.34	13.37	0.228	0.796	0.785	0.510	0.703
DBP_105	73.26	11.07	75.82	10.12	73.10	13.51	0.380	0.685	0.497	0.962	0.416
DBP_110	76.35	9.34	76.38	9.91	74.95	13.93	0.098	0.907	0.996	0.709	0.710
DBP_115	75.29	9.73	75.13	11.27	75.36	13.84	0.002	0.998	0.968	0.986	0.952
DBP_120	73.71	9.99	75.44	10.30	76.64	13.97	0.294	0.746	0.676	0.447	0.759

DBP_125	66.00	11.31	80.00	.	73.83	15.65	0.334	0.728			
DBP_130	66.00	7.07	80.00	.	75.00	10.58	0.833	0.487			
DBP_135	72.00	8.49	82.00	.	72.80	7.56	0.654	0.559			
DBP_140	62.00	8.49	.	.	69.67	12.42	0.556	0.510			
DBP_145	64.00	2.83	.	.	69.00	11.53	0.328	0.607			
DBP_150	69.00	7.07	.	.	75.00	20.81	0.141	0.732			

Figure 7: Intraoperative trends in mean diastolic blood pressure amongst the three groups.

8. Intraoperative trends in mean arterial pressure amongst the three groups

The baseline mean arterial pressure (MAP) was 124.40±14.88 mmHg, 122.84±13.68 mmHg and 123.35±14.44 mm Hg in group A, B and C respectively. The difference in mean baseline MAP was statistically non-significant among the three groups (p-value= 0.806). There is a slight decreasing trend of mean MAP over time in all the three groups after SAB. The difference in mean MAP among the three groups was statistically insignificant at all time intervals during intraoperative period (p-value>0.05).

Table 8: Intraoperative trends in mean arterial pressure amongst the three groups.

MAP (mmHg)_ Time(min)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
MAP_BASELINE	124.40	14.88	122.84	13.68	123.35	14.44	0.216	0.806	0.520	0.665	0.833
MAP_0	98.79	12.69	97.96	11.13	99.80	12.57	0.402	0.670	0.687	0.624	0.372
MAP_5	92.20	13.48	92.72	11.72	94.75	12.28	0.809	0.447	0.805	0.230	0.340
MAP_10	89.14	12.88	89.57	12.75	90.62	10.70	0.277	0.758	0.835	0.470	0.607
MAP_15	88.86	10.96	88.94	10.59	89.49	10.80	0.070	0.933	0.967	0.733	0.764
MAP_20	88.41	11.85	88.64	10.32	89.51	11.98	0.182	0.833	0.904	0.567	0.652
MAP_25	88.92	12.09	90.24	10.06	90.80	12.42	0.489	0.614	0.501	0.336	0.772
MAP_30	90.17	11.73	90.95	9.49	91.75	11.27	0.370	0.691	0.673	0.391	0.662

MAP_35	90.52	11.77	91.72	9.89	91.63	12.62	0.237	0.789	0.537	0.568	0.963
MAP_40	90.73	11.91	92.09	9.40	92.39	13.34	0.403	0.669	0.492	0.400	0.877
MAP_45	91.20	11.75	92.34	10.31	92.47	13.16	0.245	0.783	0.569	0.526	0.949
MAP_50	91.52	11.80	92.81	10.37	92.20	13.59	0.185	0.832	0.545	0.748	0.774
MAP_55	91.38	11.71	92.71	11.92	91.51	13.40	0.220	0.803	0.547	0.956	0.588
MAP_60	91.16	11.87	94.06	12.49	92.23	13.06	0.874	0.419	0.192	0.630	0.414
MAP_65	91.64	11.17	93.74	11.34	92.43	11.37	0.395	0.674	0.386	0.751	0.576
MAP_70	89.58	11.35	91.36	11.49	91.02	12.23	0.274	0.761	0.478	0.576	0.889
MAP_75	88.70	9.64	90.26	10.43	89.36	11.17	0.237	0.789	0.498	0.778	0.683
MAP_80	87.38	11.15	89.56	9.75	89.23	12.24	0.427	0.653	0.391	0.465	0.896
MAP_85	87.56	11.40	90.23	9.47	89.20	13.26	0.528	0.591	0.309	0.532	0.688
MAP_90	88.07	11.87	90.38	9.28	90.72	11.89	0.642	0.528	0.363	0.297	0.890
MAP_95	92.56	12.93	90.26	8.88	89.30	13.20	0.444	0.643	0.542	0.351	0.774
MAP_100	92.56	13.36	90.77	10.64	93.34	24.29	0.128	0.880	0.758	0.884	0.617
MAP_105	91.07	11.84	91.65	10.88	89.77	13.43	0.163	0.850	0.880	0.718	0.585
MAP_110	93.02	10.17	91.90	11.20	91.74	13.51	0.062	0.940	0.787	0.741	0.969
MAP_115	92.27	9.35	90.90	11.73	91.58	14.67	0.051	0.950	0.751	0.862	0.868
MAP_120	89.96	9.46	90.21	10.93	92.61	13.51	0.312	0.733	0.952	0.485	0.534
MAP_125	82.67	7.54	94.67	.	81.05	19.52	0.243	0.791			
MAP_130	83.00	6.13	95.33	.	81.33	20.03	0.247	0.789			

MAP_135	87.00	9.90	96.00	.	80.67	18.17	0.392	0.692			
MAP_140	79.67	9.90	.	.	83.89	14.53	0.123	0.749			
MAP_145	81.17	4.48	.	.	84.11	12.69	0.091	0.782			
MAP_150	84.67	4.71	.	.	88.00	20.21	0.048	0.841			

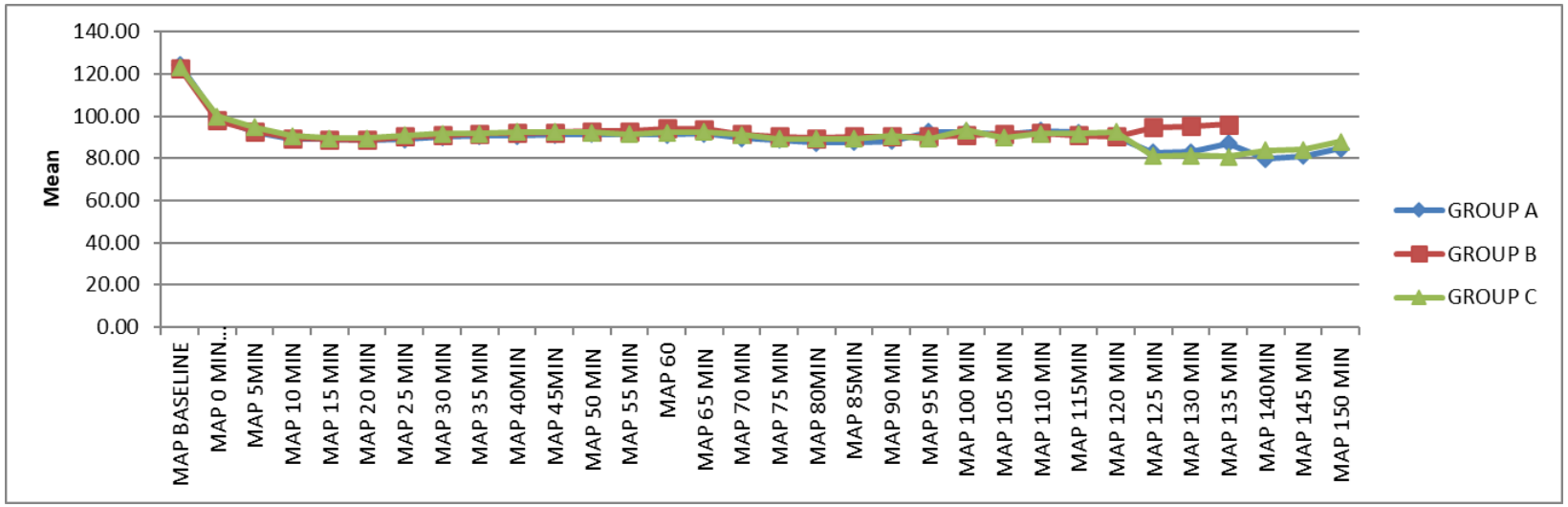


Figure 8: Intraoperative trends in mean arterial pressure amongst the three groups.

9. Intraoperative trends in mean arterial oxygen saturation (SpO2) amongst the three groups

The baseline mean arterial oxygen saturation pressure (SpO2) was 98.10±1.29, 97.91±1.48 and 97.87±1.20 in group A, B and C respectively. The difference in mean SpO2 at baseline was statistically non-significant in all three groups (p-value= 0.558). The difference in mean SpO2 among the three groups was statistically non-significant at all time intervals during intraoperative period (p-value>0.05).

Table 9: Intraoperative trends in mean arterial oxygen saturation (SpO2) amongst the three groups.

SpO2 (%)_ Time(min)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
SPO2_Base line	98.10	1.29	97.91	1.48	97.87	1.20	0.585	0.558	0.409	0.310	0.849
SPO2_0	98.57	1.26	98.31	1.47	98.31	1.10	0.936	0.394	0.237	0.237	1.000
SPO2_05	98.57	1.26	98.31	1.47	98.31	1.10	0.936	0.394	0.237	0.237	1.000
SPO2_10	98.60	1.18	98.19	1.45	98.26	1.22	2.061	0.130	0.059	0.118	0.744
SPO2_15	98.59	1.30	98.34	1.41	98.33	1.22	0.845	0.431	0.276	0.249	0.949
SPO2_20	98.57	1.26	98.31	1.47	98.31	1.10	0.936	0.394	0.237	0.237	1.000
SPO2_25	98.60	1.33	98.41	1.37	98.39	1.12	0.580	0.561	0.391	0.323	0.895
SPO2_30	98.71	1.54	98.46	1.33	98.56	0.99	0.690	0.503	0.245	0.477	0.651
SPO2_35	98.91	1.11	98.47	1.39	98.56	1.11	2.628	0.075	0.032	0.083	0.676

SPO2_40	98.70	1.37	98.40	1.40	98.46	1.18	1.025	0.361	0.179	0.276	0.798
SPO2_45	98.70	1.28	98.59	1.29	98.46	1.19	0.658	0.519	0.590	0.253	0.545
SPO2_50	98.80	1.15	98.69	1.34	98.67	1.08	0.225	0.799	0.615	0.528	0.900
SPO2_55	98.77	1.31	98.69	1.28	98.66	1.17	0.135	0.874	0.734	0.612	0.867
SPO2_60	98.72	1.24	98.52	1.45	98.62	1.14	0.412	0.663	0.365	0.662	0.645
SPO2_65	98.21	1.20	98.16	1.46	97.75	1.20	1.610	0.204	0.872	0.115	0.131
SPO2_70	98.54	1.07	98.28	1.34	98.30	0.70	0.742	0.478	0.267	0.310	0.945
SPO2_75	98.47	1.29	98.49	1.33	98.30	1.02	0.340	0.712	0.953	0.512	0.451
SPO2_80	98.76	0.98	98.60	1.26	98.28	1.01	1.961	0.145	0.531	0.056	0.187
SPO2_85	98.59	1.12	98.80	1.11	98.43	1.06	1.173	0.313	0.413	0.499	0.129
SPO2_90	98.65	1.01	98.78	1.23	98.40	0.84	1.347	0.264	0.595	0.296	0.109
SPO2_95	98.63	1.26	99.09	0.92	98.38	0.83	3.461	0.037	0.140	0.371	0.011
SPO2_100	98.47	2.25	99.09	0.92	98.50	0.92	1.445	0.243	0.160	0.948	0.128
SPO2_105	98.89	0.94	99.14	0.89	98.58	1.03	2.197	0.119	0.426	0.267	0.042
SPO2_110	98.59	1.33	99.13	0.81	98.41	1.10	2.026	0.142	0.168	0.617	0.053
SPO2_115	98.59	1.12	99.25	0.77	98.36	1.00	3.903	0.026	0.059	0.482	0.008
SPO2_120	98.59	1.00	99.31	0.79	98.41	1.05	4.275	0.019	0.037	0.570	0.006
SPO2_125	99.00	1.41	99.00	.	98.17	0.41	1.471	0.302			
SPO2_130	99.00	1.41	99.00	.	98.80	1.10	0.028	0.973			
SPO2_135	98.50	0.71	99.00	.	97.80	0.45	3.029	0.137			

SPO2_140	99.00	1.41	.	.	98.33	0.58	0.600	0.495			
SPO2_145	99.00	1.41	.	.	98.67	1.15	0.086	0.789			
SPO2_150	99.00	1.41	.	.	97.67	0.58	2.400	0.219			

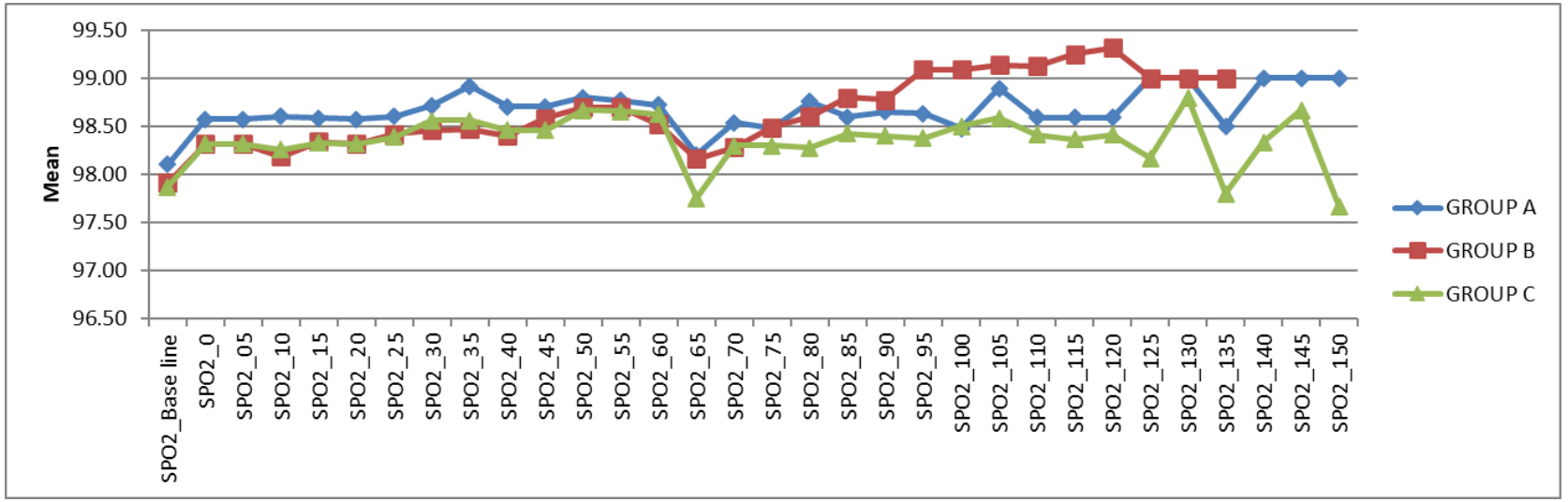


Figure 9: Intraoperative trends in mean arterial oxygen saturation (SpO2) amongst the three groups.

10. Intraoperative trends in mean respiratory rate amongst the three groups

The baseline mean respiratory rate was 17.51±1.28, 17.31±1.36 and 17.46±1.48 in group A, B and C respectively. The difference in mean respiratory rate was statistically insignificant (p-value= 0.676). The difference in mean respiratory rate among all the three groups was statistically non-significant at all time intervals during intraoperative period (p-value>0.05).

Table 10: Intraoperative trends in mean respiratory rate amongst the three groups

RR_Time(min)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
RR_Baseline	17.51	1.28	17.31	1.36	17.46	1.48	0.392	0.676	0.391	0.806	0.540
RR_0	17.49	1.20	17.29	1.36	17.50	1.52	0.537	0.585	0.388	0.951	0.355
RR_5	17.46	1.26	17.29	1.36	17.47	1.49	0.396	0.674	0.461	0.951	0.425
RR_10	17.46	1.16	17.29	1.36	17.43	1.41	0.341	0.712	0.442	0.898	0.522
RR_15	17.46	1.16	17.29	1.36	17.46	1.48	0.381	0.684	0.451	1.000	0.451
RR_20	17.49	1.15	17.29	1.36	17.37	1.34	0.424	0.655	0.360	0.601	0.695
RR_25	17.46	1.16	17.29	1.36	17.46	1.47	0.383	0.683	0.450	1.000	0.450
RR_30	17.46	1.16	17.29	1.36	17.43	1.45	0.333	0.717	0.447	0.899	0.526
RR_35	17.46	1.16	17.29	1.36	17.44	1.46	0.355	0.701	0.448	0.950	0.487

RR_40	17.43	1.22	17.29	1.36	17.40	1.42	0.224	0.800	0.528	0.900	0.614
RR_45	17.46	1.16	17.29	1.36	17.31	1.31	0.359	0.699	0.430	0.511	0.895
RR_50	17.40	1.13	17.23	1.37	17.49	1.34	0.693	0.501	0.446	0.685	0.248
RR_55	17.40	1.13	17.23	1.37	17.51	1.44	0.719	0.488	0.458	0.646	0.237
RR_60	17.40	1.13	17.23	1.37	17.51	1.40	0.738	0.480	0.452	0.642	0.231
RR_65	17.56	1.27	17.32	1.43	17.55	1.61	0.409	0.665	0.432	0.953	0.453
RR_70	17.51	1.12	17.28	1.44	17.61	1.66	0.670	0.513	0.449	0.750	0.263
RR_75	17.55	1.11	17.32	1.46	17.57	1.62	0.430	0.651	0.454	0.961	0.407
RR_80	17.49	1.04	17.30	1.40	17.60	1.52	0.509	0.602	0.544	0.711	0.319
RR_85	17.49	1.04	17.30	1.40	17.65	1.63	0.639	0.530	0.556	0.606	0.261
RR_90	17.49	1.04	17.30	1.40	17.55	1.47	0.384	0.682	0.538	0.834	0.400
RR_95	17.47	0.90	17.45	1.41	17.59	1.68	0.075	0.928	0.966	0.773	0.727
RR_100	17.47	0.90	17.45	1.41	17.56	1.66	0.044	0.957	0.966	0.830	0.785
RR_105	17.47	0.90	17.45	1.41	17.52	1.65	0.013	0.987	0.966	0.918	0.876
RR_110	17.53	0.87	17.63	1.50	17.27	1.45	0.370	0.692	0.836	0.549	0.420
RR_115	17.53	0.87	17.63	1.50	17.18	1.47	0.605	0.550	0.837	0.420	0.313
RR_120	17.53	0.87	17.63	1.50	17.27	1.45	0.370	0.692	0.836	0.549	0.420
RR_125	18.00	0.00	18.00	0.00	17.78	1.20	0.076	0.928	1.000	0.751	0.787
RR_130	18.00	0.00	18.00	.	17.60	0.89	0.234	0.799			
RR_135	18.00	0.00	18.00	.	17.60	0.89	0.234	0.799			

RR_140	18.00	0.00	.	.	19.00	1.00	1.800	0.272			
RR_145	18.00	0.00	.	.	18.33	0.58	0.600	0.495			
RR_150	18.00	0.00	.	.	18.67	1.15	0.600	0.495			

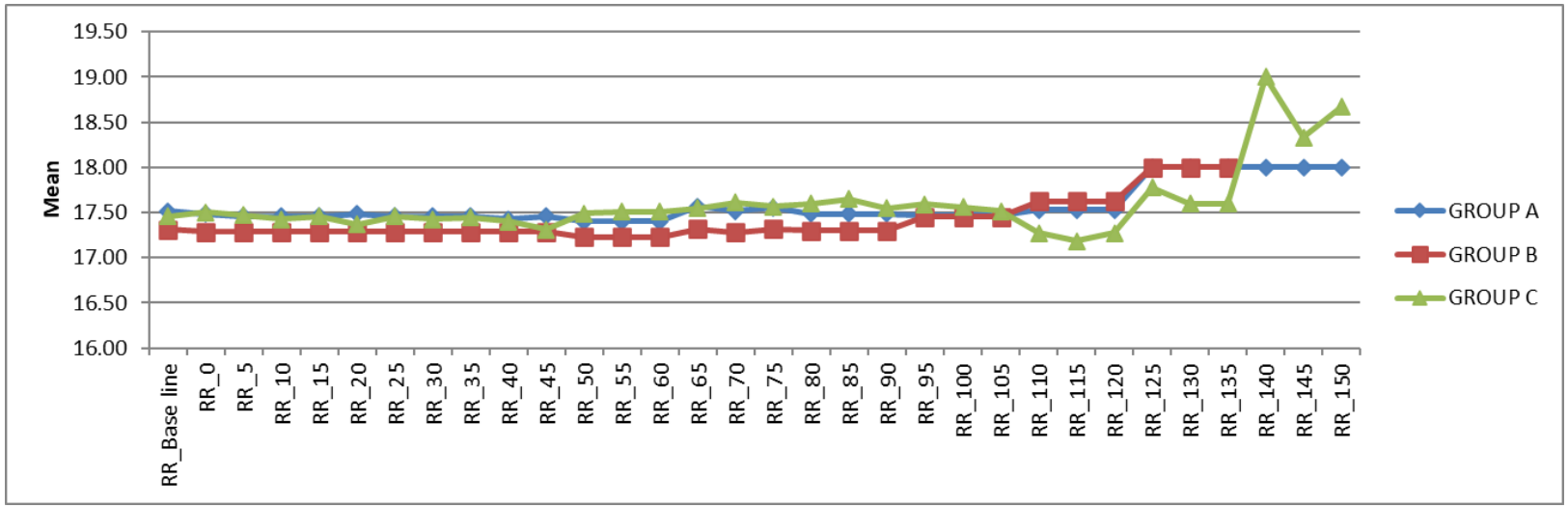


Figure 10: Intraoperative trends in mean respiratory rate amongst the three groups.

11. Trends in forehead temperature amongst the three groups

The baseline forehead temperature was 97.23±0.63°F, 97.24±0.66 °F and 97.43±0.66°F in group A, B and C respectively. The difference in mean forehead temperature was statistically insignificant (p-value= 0.124). After baseline there was a gradual fall in the temperature throughout the observation period. The difference of mean forehead temperature among groups A, B and C, was statistically insignificant at all time intervals over the period of observation(p-value>0.05).

Table 11:Trends in forehead temperature amongst the three groups

Forehead temp (^{0}F)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
Temp_Baseline	97.23	0.63	97.24	0.66	97.43	0.66	2.109	0.124	0.979	0.075	0.079
Temp_0 min	97.39	0.72	97.26	0.62	97.37	0.79	0.661	0.518	0.281	0.842	0.380
Temp_30 min	97.17	0.66	97.16	0.63	97.23	0.81	0.166	0.847	0.969	0.632	0.605
Temp_60 min	97.18	0.59	97.10	0.55	97.12	0.59	0.386	0.680	0.391	0.557	0.787
Temp_90 min	97.16	0.55	96.97	0.66	97.12	0.52	2.193	0.114	0.046	0.633	0.128
Temp_120 min	97.01	0.52	96.96	0.70	97.02	0.50	0.272	0.762	0.552	0.937	0.500
Temp_150 min	96.84	0.42	96.78	0.88	96.84	0.87	0.175	0.840	0.602	0.984	0.617
Temp_180 min	96.72	0.48	96.69	0.66	96.83	0.46	1.291	0.277	0.764	0.225	0.131

Temp_210 min	96.62	0.50	96.59	0.56	96.72	0.50	1.121	0.328	0.771	0.261	0.158
Temp_240 min	96.60	0.43	96.72	0.47	96.74	0.51	1.884	0.155	0.133	0.072	0.763
Temp_270 min	96.57	0.47	96.53	0.62	96.71	0.58	1.892	0.153	0.673	0.153	0.065
Temp_300 min	96.45	0.69	96.56	0.65	96.63	0.63	1.396	0.250	0.303	0.100	0.535
Temp_330 min	96.50	0.64	96.63	0.72	96.67	0.62	1.168	0.313	0.279	0.142	0.697
Temp_360min	96.54	0.74	96.68	0.67	96.70	0.66	1.211	0.300	0.211	0.156	0.867

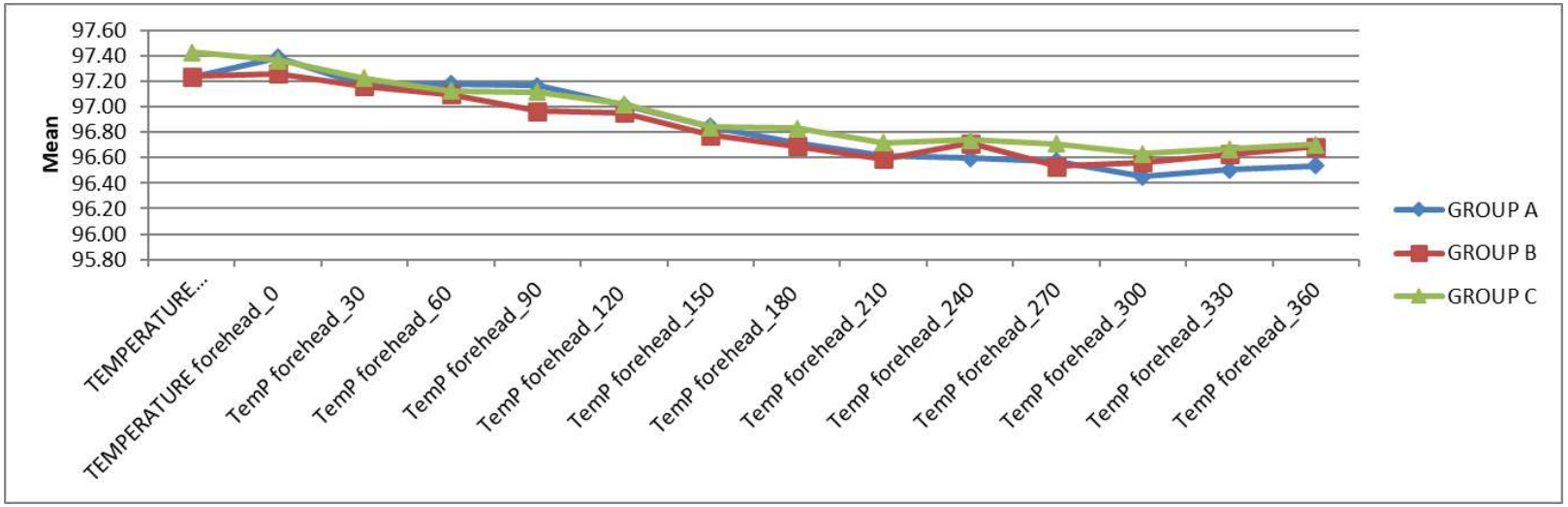


Figure 11: Trends in forehead temperature amongst the three groups.

12. Trends in tympanic membrane temperature amongst the three groups

The baseline mean tympanic membrane temperature of group A and B was 97.99±0.95 °F and 98.02±.03°F while that of group C was 98.03±0.87 °F. The difference in mean tympanic temperature at baseline was statistically non-significant (p-value= 0.963). The tympanic membrane temperature initially had a falling trend. The difference in mean tympanic temperature among group A, B and C, was statistically non-significant at all time intervals over the period of observation.

Table 12:Trends in tympanic membrane temperature amongst the three groups

Tympanic membrane temp (^{0}F)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
Temp tympanic memb_Baseline	97.99	0.95	98.02	0.75	98.03	0.87	0.038	0.963	0.868	0.784	0.914
Temp tympanic memb_0	97.87	1.07	97.79	0.93	97.84	0.78	0.144	0.866	0.594	0.828	0.752
Temp tympanic memb_30	97.79	0.98	97.73	0.80	97.69	0.99	0.193	0.824	0.729	0.536	0.785
Temp tympanic memb_60	97.54	1.09	97.63	0.90	97.66	0.98	0.273	0.761	0.604	0.475	0.845

Temp tympanic memb_90	97.57	0.96	97.44	0.84	97.57	0.86	0.508	0.603	0.397	0.962	0.371
Temp tympanic memb_120	97.58	0.90	97.35	1.01	97.44	1.14	0.905	0.406	0.182	0.433	0.580
Temp tympanic memb_150	97.37	0.95	97.25	0.98	97.35	1.07	0.273	0.762	0.495	0.919	0.561
Temp tympanic memb_180	97.13	1.49	96.94	1.48	97.12	0.95	0.422	0.656	0.418	0.975	0.437
Temp tympanic memb_210	97.04	1.11	96.94	1.10	97.08	0.94	0.323	0.725	0.592	0.804	0.433
Temp tympanic memb_240	96.89	1.19	96.84	1.15	97.06	0.98	0.755	0.471	0.773	0.375	0.240
Temp tympanic memb_270	96.82	1.23	96.84	1.22	97.02	0.99	0.688	0.503	0.907	0.286	0.342
Temp tympanic memb_300	96.94	0.86	97.01	0.95	96.94	0.87	0.132	0.877	0.644	0.970	0.672
Temp tympanic memb_330	96.94	0.97	97.02	1.03	96.91	0.82	0.257	0.774	0.623	0.837	0.486
Temp tympanic memb_360	96.87	1.20	97.04	0.87	96.99	0.90	0.489	0.614	0.337	0.500	0.774

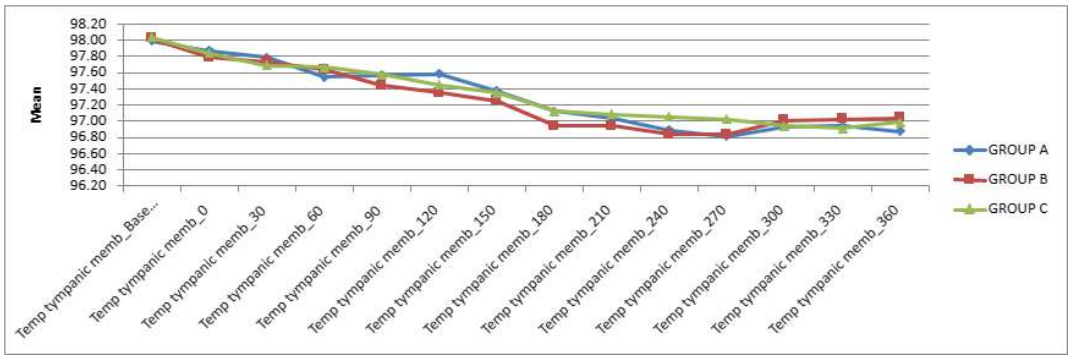


Figure 12: Trends in tympanic membrane temperature amongst the three groups

13. Incidence of shivering amongst the three groups

The incidence of shivering was 12.9% (n=9), 22.9 %(n=16) and 42.9 %(n=30) in group A, B and C, respectively. The incidence of shivering in groups A and B were significantly lower than group C. (p-value=0.001). The highest incidence of shivering was observed in group C. The difference in incidence of shivering between group A and group B was statistically not significant. (p-value=0.122) The incidence of shivering was significantly lower in group B compared to group C and was statistically significant (p value=0.001). The incidence of shivering in group B was significantly lower than group C and the difference between the group A and C was statistically significant. (p value=0.001).

Table 13: Incidence of shivering amongst the three groups.

	GROUP A		GROUP B		GROUP C		Total	Chi-square value	p-value	A VS B	B VS C	A VS C
	No. of patients	%age	No. of patients	%age	No. of patients	%age				p-value	p-value	p-value
Shivering	9	12.9%	16	22.9%	30	42.9%	55	16.899	0.001	0.122	0.001	0.001

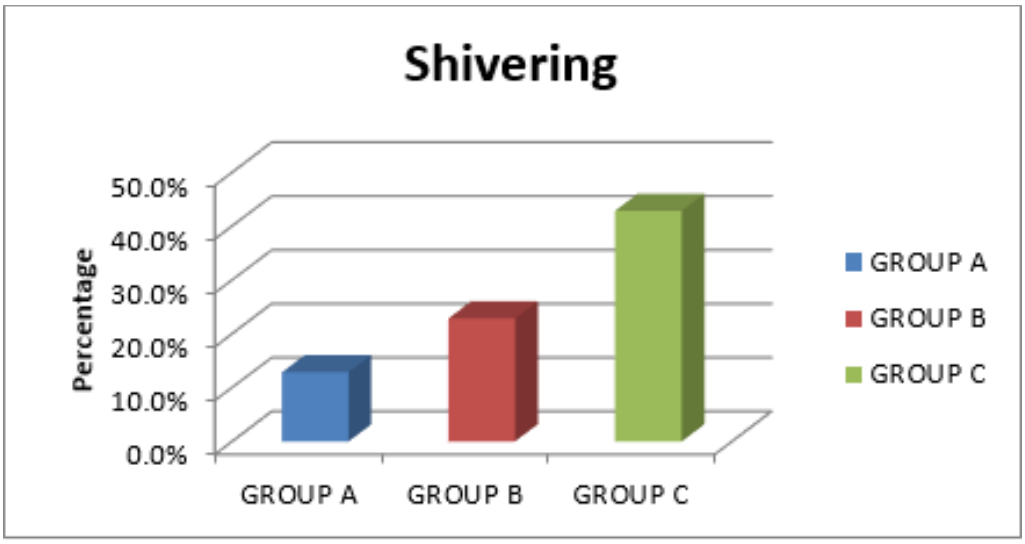


Figure 13: Incidence of shivering amongst the three groups

14. Incidence of grades of shivering amongst the three groups

In Group A, 12.9% (n=9) of the subjects experienced shivering. 6 of them experienced mild shivering of grade 1 and 2. 4.3% of the subjects experienced severe grades of shivering i.e. grade 3 and 4 while 87.1 % of the subjects did not experience any shivering.

In Group B, 22.9% of the patients (16/70) experienced shivering. 15.7% of the patients experienced mild shivering (grade 1 and 2). 7.2% patients (5/70) experienced severe grades of shivering (grade 3 and 4) while 77.1% patients did not experience any shivering.

In Group C, 42.9% of the patients (30/70) experienced shivering. 5.7% of the patients experienced mild shivering (grade 1 and 2). 37.1% patients (26/70) had experienced severe grades of shivering (grade 3 and 4) while 40 patients (57.1%) did not experience any shivering.

The difference in incidence of mild grades of shivering which are grade 1 and 2 were statistically not significant amongst all three groups. (p-value=0.185 and p-value=0.563, respectively). However, the incidence of severe grades of shivering which are grade 3 and 4 were statistically significant among the three groups (p-value=0.001, p-value=0.003, respectively). The severity of shivering was significantly lower in groups A and group B as compared to group C. (p-value=0.002 and p-value=0.001, respectively). However, the difference in severity of shivering was comparable between group A and B (p-value>0.05).

Table 14: Incidence of grades of shivering amongst the three groups

	GROUP A		GROUP B		GROUP C		Total	Chi-square value	p-value	A VS B	B VS C	A VS C
Grades of shivering as per Wrench	No. of patients	%age	No. of patients	%age	No. of patients	%age				p-value	p-value	p-value
Grade 0	61	87.1%	54	77.1%	40	57.1%	**155**	16.899	0.001	0.122	0.001	0.001
Grade 1	2	2.9%	5	7.1%	1	1.4%	8	3.379	0.185	0.244	0.559	0.095
Grade 2	4	5.7%	6	8.6%	3	4.3%	13	1.148	0.563	0.512	0.698	0.301
Grade 3	1	1.4%	3	4.3%	15	21.4%	19	19.906	0.001	0.310	0.001	0.002
Grade 4	2	2.9%	2	2.9%	11	15.7%	15	11.631	0.003	1.000	0.008	0.008

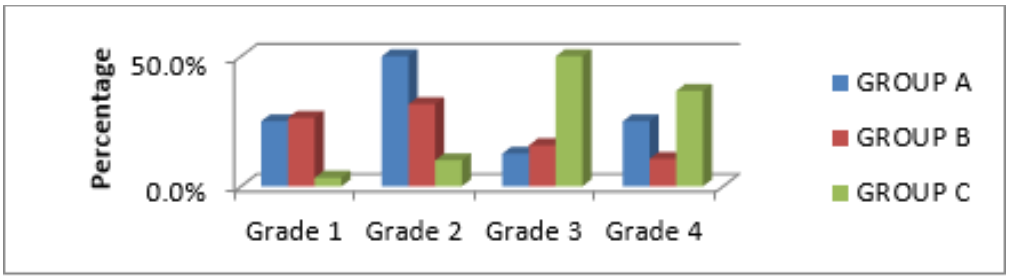


Figure 14: Incidence of grades of shivering amongst the three groups

15. Comparison of the onset of shivering amongst the three groups

The mean time of onset of shivering in group A, B and C were 26.36±9.77 min, 29.06± 10.99 min and 24.43± 10.26 min. The time of onset of shivering was statistically similar among all the three groups (p-value=0.360).

Table 15: Comparison of the onset of shivering amongst the three groups

	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
Onset of shivering (min)	26.36	9.77	29.06	10.99	24.43	10.26	1.042	0.360	0.510	0.600	0.155

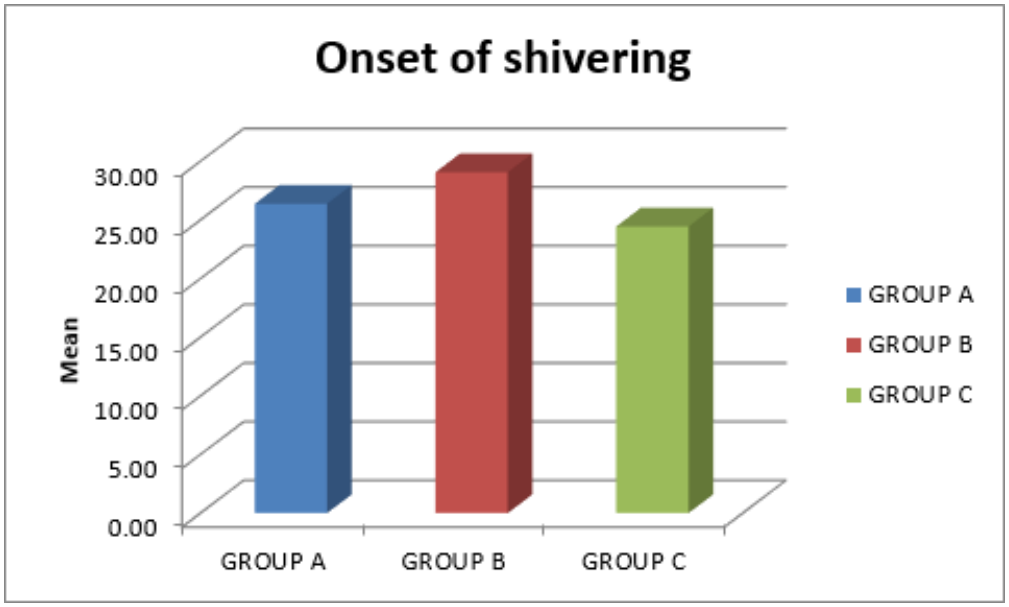


Figure 15: Distribution of the onset of shivering amongst three groups

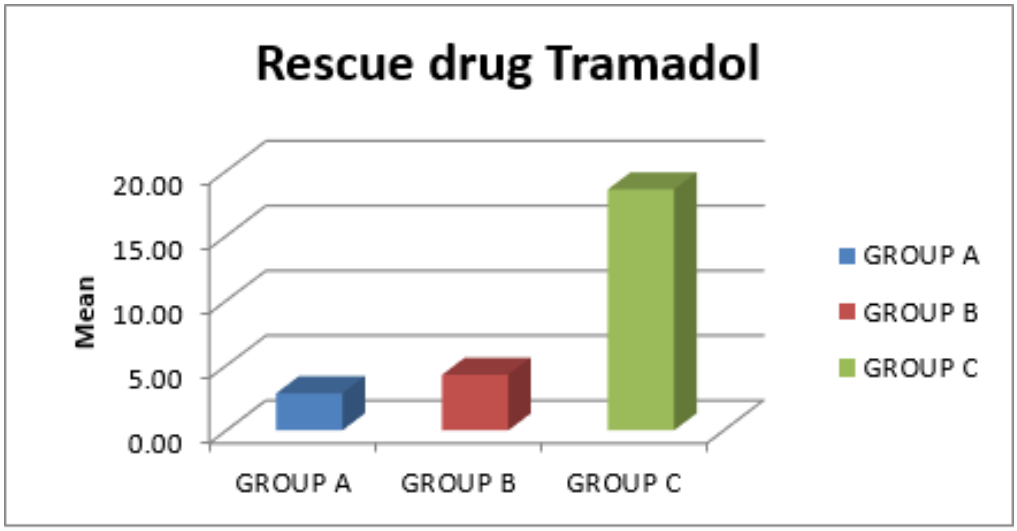
16. Comparison of tramadol consumption amongst the three groups

The severe grades of shivering i.e. grade 3 and grade 4 were administered Inj. Tramadol 50 mg iv as rescue drug. 3 out of 70 patients in group A, 5 out of 70 patients in group B and 26 out of 70 patients in group C experienced severe shivering and were administered Inj. Tramadol 50 mg iv each. No patient needed repeat dosage of Inj. Tramadol 50 mg iv. The mean tramadol consumption in group A, B and C was 2.86±11.69 mg, 4.29 ± 14.10 mg and 18.57± 24.33 mg respectively. The difference in mean consumption of tramadol was significantly lower in group A and B as compared to group C (p-value=0.001 and p-value=0.001, respectively). The mean consumption of tramadol was similar in Group A and B (p-value=0.631)

Table 16: Comparison of tramadol consumption amongst the three groups

	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
Mean Tramadol consumption (mg)	2.86	11.69	4.29	14.10	18.57	24.33	17.096	0.001	0.631	0.001	0.001

Figure 16: Comparison of tramadol consumption amongst the three groups



17. Comparison of the cessation of shivering amongst the three groups

The mean time taken for cessation of shivering after rescue drug administration in group A, B and C was 6.18±1.60 min, 7.06±3.30 min and 6.07±2.03 min respectively. All the three groups were comparable in mean time of cessation of shivering (p-value=0.394).

Table 17: Comparison of the cessation of shivering amongst the three groups

	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
Cessation of shivering (min)	6.18	1.60	7.06	3.30	6.07	2.03	0.947	0.394	0.351	0.892	0.184

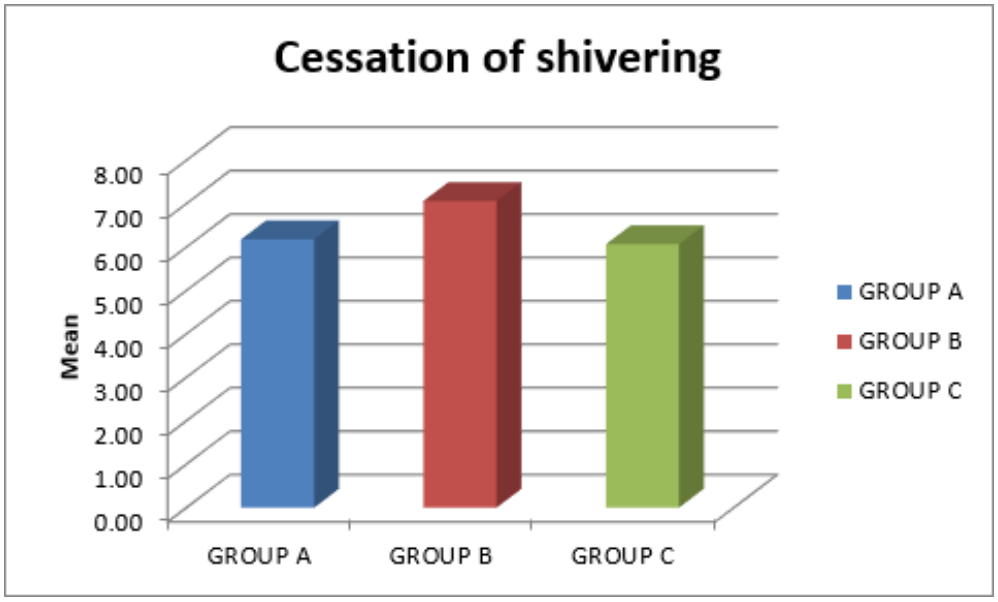


Figure 17: Distribution of cessation of shivering amongst the three groups

18. Distribution of MOSS A score amongst three groups

In group A, 98.6% of the patients had MOSS A score 5 and 1.4% of the patients had MOSS A score 4. In group B, 95.7% of the patients had MOSS A score 5 and 4.3% of the patients had MOSS A score 4. In group C, 87.1% of the patients had MOSS A score 5 and 12.9% of the patients had MOSS A score 4. None of the patients in any groups had MOSS A score <4. The difference in sedation score (MOSS A 4) was statistically significant (p-value=0.014). The incidence of sedation was significant lower in groups A and B as compared to group C(p value= 0.008, p-value=0.008, respectively). The difference between group A and B was statistically non-significant (p-value=0.310).

Table 18: Distribution of MOSS A score amongst three groups

	GROUP A		GROUP B		GROUP C		Total	Chi-square value	p-value	A VS B	B VS C	A VS C
	No. of cases	%age	No. of cases	%age	No. of cases	%age				p-value	p-value	p-value
MOSS A SCORE 6	0	0.0%	0	0.0%	0	0.0%	0					
MOSS A SCORE 5	69	98.6%	67	95.7%	61	87.1%	197	8.528	0.014	0.310	0.008	0.070
MOSS A SCORE 4	1	1.4%	3	4.3%	9	12.9%	13					
MOSS A SCORE 3	0	0.0%	0	0.0%	0	0.0%	0					
MOSS A SCORE 2	0	0.0%	0	0.0%	0	0.0%	0					
MOSS A SCORE 1	0	0.0%	0	0.0%	0	0.0%	0					
MOSS A SCORE 0	0	0.0%	0	0.0%	0	0.0%	0					

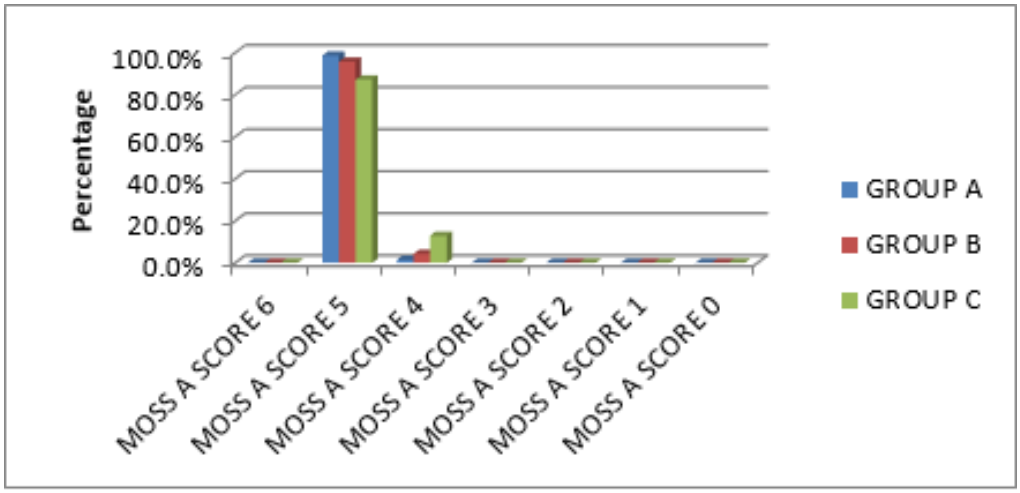


Figure 18: Distribution of MOSS A score amongst three groups

19. Adverse effects amongst the three groups

Bradycardia was observed in 1 patient each in group A and 1 patient in group C. None of the patients in group B had bradycardia. The difference in incidence of bradycardia was statistically insignificant (p-value=0.604).

The incidence of hypotension was 28.6%, 31.4% and 35.7% in group A, group B and group C respectively. The difference among the three groups was statistically insignificant (p-value =1.010).

The incidence of nausea and vomiting was seen in 3, 4 and 18 patients in group A, group B and group C, respectively. On comparison among the three groups statistically significant difference was seen (p- value = 0.001). Group A and B had significantly lower incidence of nausea/vomiting compared to group C (p-value=0.001 and p-value =0.001, respectively). The difference between group A and B was statistically insignificant (p-value=0.698).

Incidence of dizziness/sedation in group A was 1.4%, 4.3% in group B and 12.9% in group C. There was statistically significant difference among the three groups (p-value=0.014). Incidence of dizziness/ sedation was significantly lower in group A and B compared to group C (p-value=0.007 and p-value=0.008, respectively). The difference between group A and B was statistically non-significant (p-value=0.310).

Table 19: Adverse effects amongst the three groups

	GROUP A		GROUP B		GROUP C		Total	Chi-square value	p-value	A VS B	B VS C	A VS C
Adverse effects	No. of cases	%age	No. of cases	%age	No. of cases	%age				p-value	p-value	p-value
Bradycardia	1	1.4%	0	0.0%	1	1.4%	2	1.010	0.604	0.316	0.316	1.000
Hypotension	20	28.6%	22	31.4%	25	35.7%	67	0.833	0.659	0.712	0.366	0.591
Nausea & vomiting	3	4.3%	4	5.7%	18	25.7%	25	19.161	0.001	0.698	0.001	0.001
Dizziness/sedation (MOSS A ≤ 4)	1	1.4%	3	4.3%	9	12.9%	13	8.528	0.014	0.310	0.008	0.007

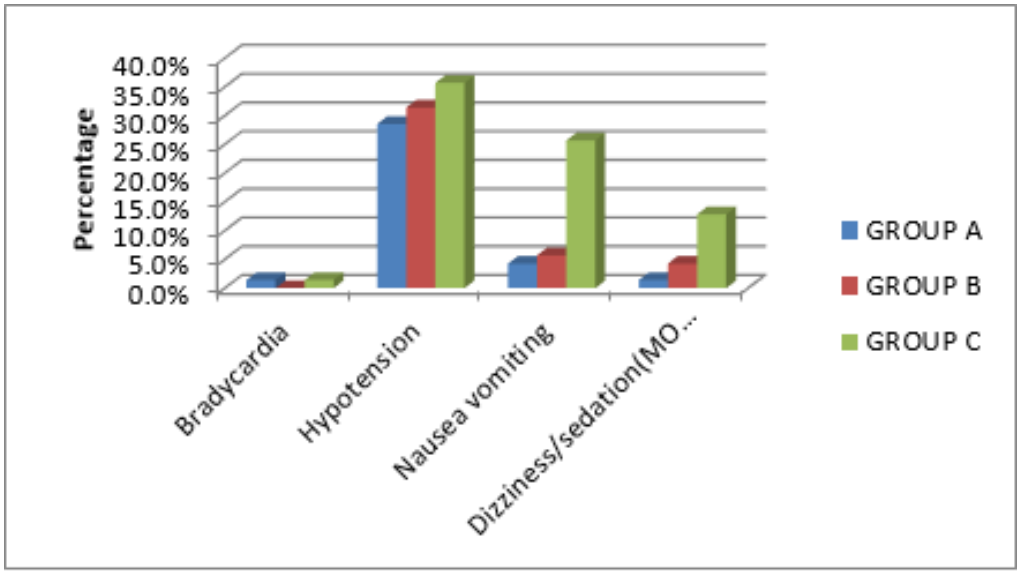


Figure 19: Adverse effects amongst the three groups

20. Postoperative trends of mean heart rate amongst all three groups

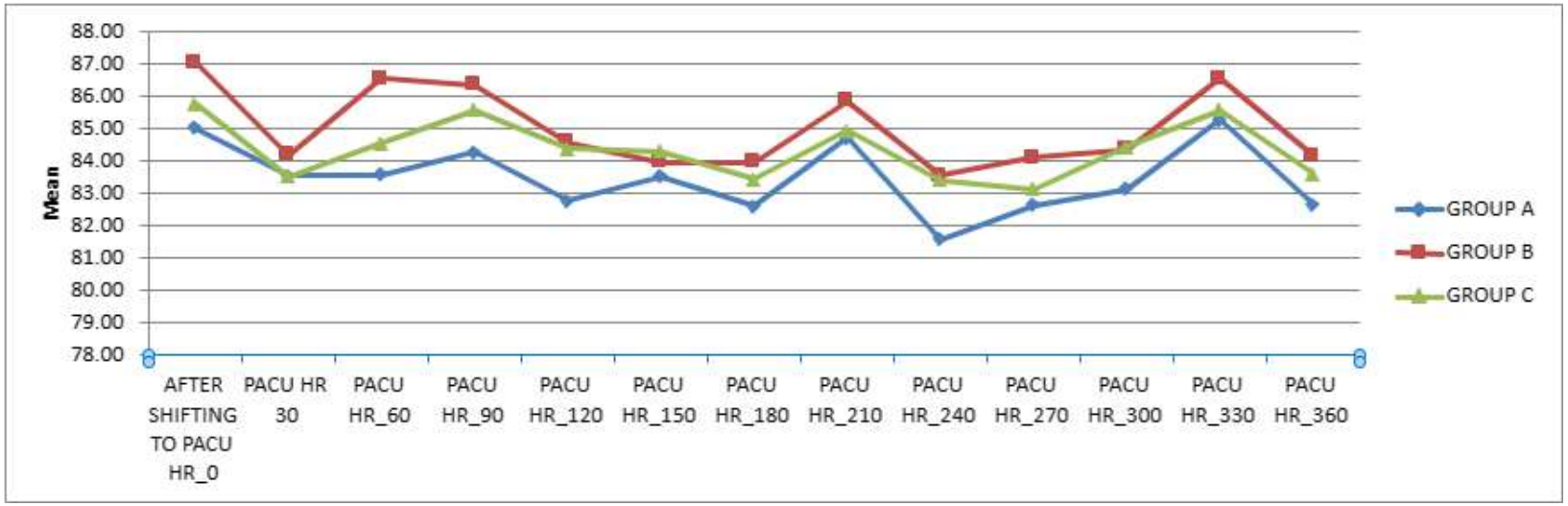
The mean heart rate after shifting to PACU was statistically insignificant among groups A, B and C (p-value = 0.339). The difference in mean HR was comparable between groups A, B and C at all time intervals during the observation period in PACU (p-value>0.05).

Table 20: Postoperative trends of mean heart rate amongst all three groups

HR (b/min)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
AFTER SHIFTING TO PACU HR_0	85.01	15.92	87.04	14.20	85.76	14.06	0.339	0.713	0.417	0.766	0.607
PACU HR_30	83.54	15.23	84.17	12.87	83.51	14.68	0.047	0.954	0.795	0.991	0.786
PACU HR_60	83.57	16.16	86.54	14.17	84.53	14.84	0.708	0.494	0.245	0.708	0.430
PACU HR_90	84.26	16.20	86.34	13.56	85.57	14.60	0.354	0.702	0.406	0.600	0.758
PACU HR_120	82.74	15.82	84.57	13.27	84.36	15.10	0.321	0.726	0.465	0.519	0.932
PACU HR_150	83.50	15.13	83.96	12.73	84.27	14.73	0.052	0.949	0.849	0.749	0.896
PACU HR_180	82.59	14.93	83.94	12.31	83.41	14.09	0.172	0.842	0.562	0.723	0.821
PACU HR_210	84.69	15.11	85.83	13.09	84.93	15.91	0.117	0.890	0.647	0.923	0.718
PACU HR_240	81.56	15.58	83.54	13.09	83.39	14.77	0.405	0.668	0.419	0.457	0.949

PACU HR_270	82.61	14.90	84.09	12.29	83.10	13.36	0.214	0.807	0.522	0.832	0.668
PACU HR_300	83.10	15.04	84.34	12.63	84.43	13.99	0.200	0.819	0.598	0.573	0.971
PACU HR_330	85.24	15.80	86.54	13.78	85.57	14.18	0.150	0.861	0.599	0.894	0.694
PACU HR_360	82.63	14.96	84.13	12.68	83.59	14.08	0.208	0.812	0.525	0.685	0.818

Figure 20:Postoperative trends in mean heart rate amongst the three groups



21. Postoperative trends in mean systolic blood pressure amongst the three groups

The mean SBP after shifting to PACU was statistically non-significant amongst the groups A, B and C (p-value = 0.943). The difference in mean SBP was comparable between groups A, B and C at all time intervals during the observation period in PACU (p-value>0.05).

Table 21: Postoperative trends in mean systolic blood pressure amongst the three groups

SBP (mmHg)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
PACU SBP_00	122.89	15.63	123.53	13.41	123.71	15.90	0.059	0.943	0.800	0.745	0.942
PACU SBP_30	123.80	15.41	123.71	13.70	124.09	16.53	0.011	0.989	0.974	0.912	0.886
PACU SBP_60	123.81	15.44	123.97	12.84	124.37	17.04	0.025	0.975	0.951	0.829	0.876
PACU SBP_90	123.80	15.41	123.50	13.69	124.47	17.38	0.071	0.931	0.909	0.799	0.712
PACU SBP_120	124.31	15.54	123.86	13.97	125.13	16.96	0.120	0.887	0.862	0.757	0.629
PACU SBP_150	124.54	16.09	124.57	15.07	125.14	17.66	0.030	0.970	0.992	0.828	0.836
PACU SBP_180	125.53	16.96	125.74	16.80	126.31	16.15	0.042	0.959	0.939	0.780	0.839
PACU SBP_210	121.63	15.75	121.67	14.36	122.80	16.09	0.130	0.878	0.987	0.654	0.665
PACU SBP_240	122.06	15.86	121.50	14.33	122.86	15.68	0.139	0.870	0.830	0.757	0.600

PACU SBP_270	122.61	15.62	123.00	12.86	124.10	15.96	0.188	0.829	0.878	0.555	0.662
PACU SBP_300	122.89	15.63	123.50	13.40	123.71	15.90	0.057	0.944	0.809	0.744	0.933
PACU SBP_330	123.80	15.41	123.71	13.70	124.09	16.53	0.011	0.989	0.974	0.912	0.886
PACU SBP_360	123.81	15.44	123.97	12.84	124.37	17.04	0.025	0.975	0.951	0.829	0.876

Figure 21: Postoperative trends in mean systolic blood pressure amongst the three groups

22. Postoperative trends in mean diastolic blood pressure amongst the three groups

The mean DBP after shifting to PACU was statistically insignificant amongst groups A, B and C (p-value = 0.594). The difference in mean DBP was comparable in all the three groups at all time intervals during the observation period in PACU (p-value>0.05).

Table 22: Postoperative trends in mean diastolic blood pressure amongst the three groups

DBP (mmHg)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
AFTER SHIFTING TO PACU DBP_00	73.04	11.95	73.53	11.95	74.99	11.19	0.522	0.594	0.806	0.327	0.462
PACU DBP_30	73.03	10.68	72.97	10.60	73.70	10.74	0.101	0.904	0.975	0.710	0.687
PACU DBP_60	71.71	11.30	72.34	10.12	73.24	11.94	0.333	0.718	0.739	0.418	0.633
PACU DBP_90	73.04	11.95	73.67	12.21	74.99	11.19	0.495	0.610	0.753	0.331	0.510
PACU DBP _120	73.03	10.68	72.97	10.60	73.70	10.74	0.101	0.904	0.975	0.710	0.687
PACU DBP_150	71.71	11.30	72.40	10.21	73.24	11.94	0.329	0.720	0.717	0.419	0.656
PACU DBP_180	72.14	11.50	73.93	10.22	74.27	12.32	0.706	0.495	0.354	0.270	0.859
PACU DBP_210	73.81	11.00	74.67	9.59	76.24	11.18	0.942	0.391	0.633	0.177	0.382

PACU DBP_240	73.89	11.33	75.73	9.71	75.46	12.45	0.551	0.577	0.332	0.408	0.886
PACU DBP_270	72.14	11.50	73.90	10.19	74.27	12.32	0.700	0.498	0.362	0.269	0.847
PACU DBP_300	73.81	11.00	74.67	9.59	76.24	11.18	0.942	0.391	0.633	0.177	0.382
PACU DBP_330	73.89	11.33	75.39	9.32	75.46	12.45	0.447	0.640	0.425	0.404	0.970
PACU DBP_360	75.47	11.22	76.89	9.49	77.27	12.02	0.523	0.593	0.446	0.332	0.835

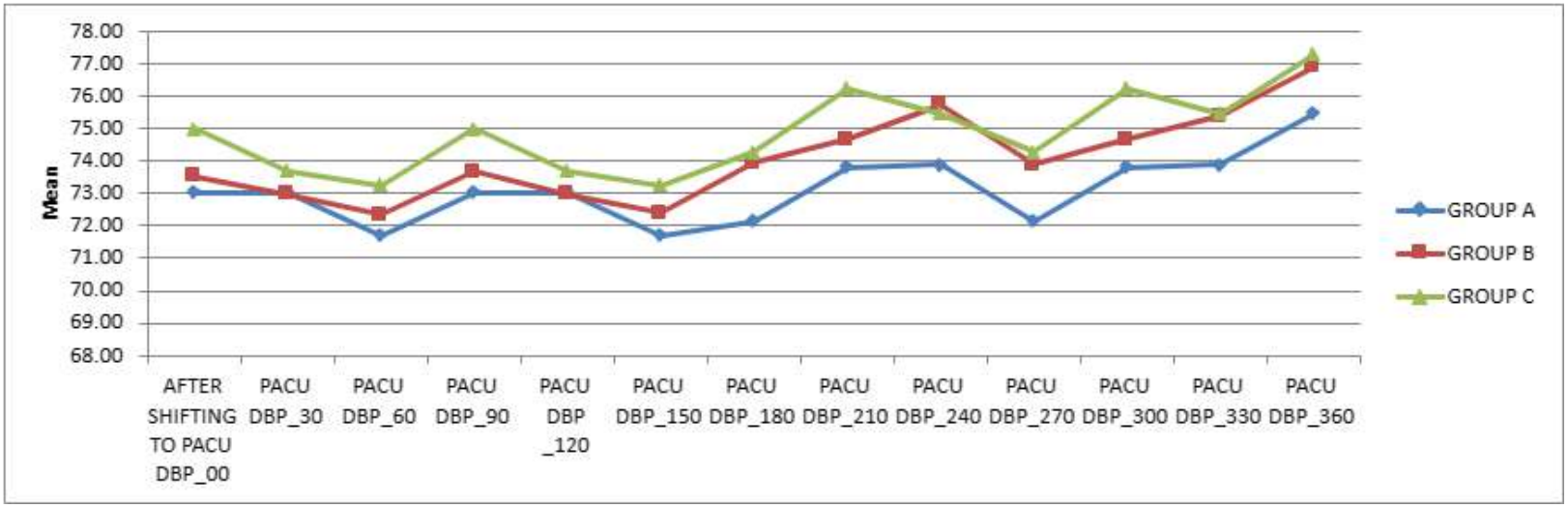


Figure 22: Postoperative trends in mean diastolic blood pressure amongst the three groups

23. Postoperative trends in mean arterial blood pressure amongst the three groups

The mean MAP after shifting to PACU was comparable among groups A, B and C (p-value = 0.712). The difference in mean MAP was statistically insignificant amongst the three groups at all time intervals during the observation period in PACU (p-value>0.05).

Table 23: Postoperative trends in mean arterial blood pressure amongst the three groups

MAP (mmHg)	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
AFTER SHIFTING TO PACU MAP 00 MIN	89.66	12.14	90.20	11.18	91.23	10.99	0.341	0.712	0.781	0.418	0.594
PACU MAP 30 MIN	89.95	10.52	89.89	10.10	90.50	10.98	0.070	0.932	0.970	0.761	0.733
PACU MAP 60 MIN	89.08	11.30	89.55	9.69	90.29	12.35	0.207	0.813	0.803	0.524	0.698
PACU MAP 90 MIN	89.96	11.97	90.28	11.19	91.48	11.55	0.335	0.716	0.871	0.438	0.540
PACU MAP 120 MIN	90.12	10.73	89.93	10.02	90.84	11.08	0.143	0.867	0.916	0.689	0.613
PACU MAP 150 MIN	89.32	11.67	89.79	9.99	90.54	12.19	0.207	0.813	0.808	0.525	0.695
PACU MAP 180 MIN	89.94	12.26	91.20	10.59	91.62	12.66	0.380	0.684	0.530	0.403	0.835
PACU MAP 210 MIN	89.75	11.35	90.34	9.35	91.76	11.16	0.658	0.519	0.745	0.266	0.430

PACU MAP 240 MIN	89.94	11.80	90.99	9.80	91.26	12.16	0.264	0.768	0.586	0.492	0.887
PACU MAP 270 MIN	88.97	12.04	90.27	10.10	90.88	12.47	0.498	0.608	0.507	0.329	0.754
PACU MAP 300 MIN	90.17	11.73	90.95	9.49	92.07	11.71	0.523	0.594	0.677	0.310	0.549
PACU MAP 330 MIN	90.52	11.77	91.50	9.53	91.67	12.63	0.205	0.815	0.614	0.553	0.929
PACU MAP 360 MIN	91.59	11.75	92.58	9.66	92.97	12.55	0.276	0.759	0.606	0.472	0.839

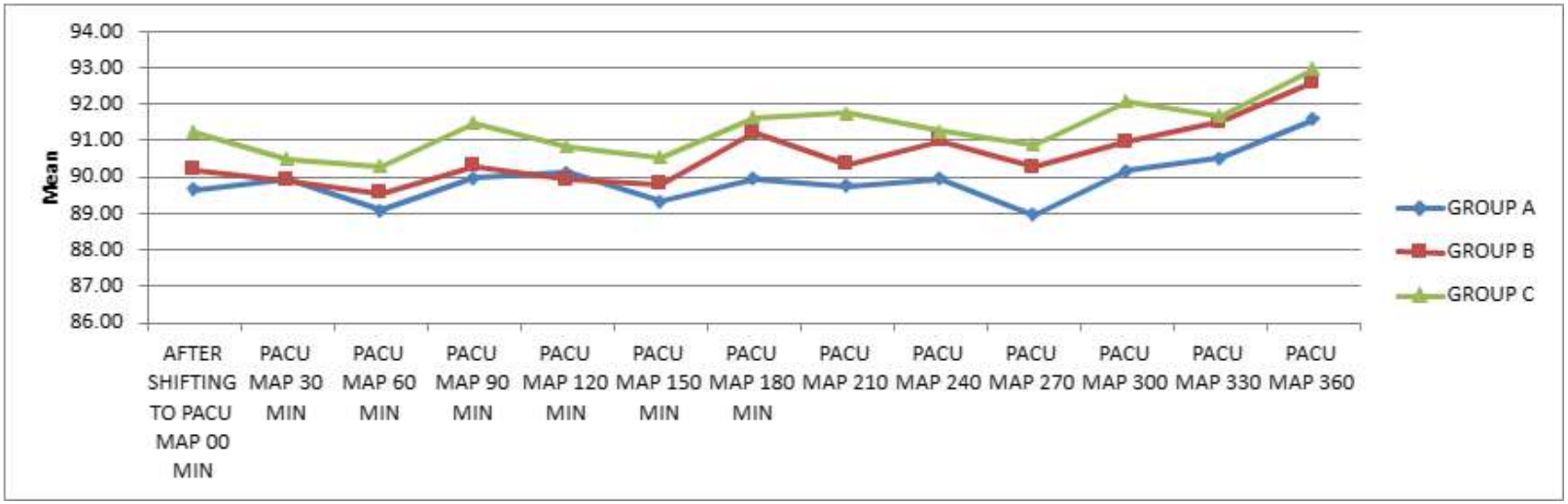


Figure 23: Postoperative trends in mean arterial blood pressure amongst the three groups

24. Postoperative trends in mean arterial oxygen saturation (SpO2) amongst the three groups

The mean SpO2 after shifting to PACU was comparable among groups A, B and C (p-value = 0.431). The difference in mean SpO2 was statistically non-significant amongst the three groups at all time intervals during the observation period in PACU (p-value>0.05).

Table 24:Postoperative trends in mean arterial oxygen saturation (SpO2) amongst the three groups.

	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
AFTER SHIFTING TO PACU SPO2_00	98.59	1.30	98.34	1.41	98.33	1.22	0.845	0.431	0.276	0.249	0.949
PACU SPO2_30	98.57	1.26	98.31	1.47	98.31	1.10	0.936	0.394	0.237	0.237	1.000
PACU SPO2_60	98.60	1.33	98.41	1.37	98.39	1.12	0.580	0.561	0.391	0.323	0.895
PACU SPO2_90	98.71	1.54	98.46	1.33	98.56	0.99	0.690	0.503	0.245	0.477	0.651
PACU SPO2_120	98.91	1.11	98.47	1.39	98.56	1.11	2.628	0.075	0.032	0.083	0.676
PACU SPO2_150	98.70	1.37	98.40	1.40	98.46	1.18	1.025	0.361	0.179	0.276	0.798
PACU SPO2_180	98.70	1.28	98.59	1.29	98.46	1.19	0.658	0.519	0.590	0.253	0.545
PACU SPO2_210	98.57	1.26	98.31	1.47	98.31	1.10	0.936	0.394	0.237	0.237	1.000
PACU SPO2_240	98.60	1.33	98.41	1.37	98.39	1.12	0.580	0.561	0.391	0.323	0.895

PACU SPO2_270	98.71	1.54	98.46	1.33	98.56	0.99	0.690	0.503	0.245	0.477	0.651
PACU SPO2_300	98.91	1.11	98.47	1.39	98.56	1.11	2.628	0.075	0.302	0.083	0.676
PACU SPO2_330	98.70	1.37	98.40	1.40	98.46	1.18	1.025	0.361	0.179	0.276	0.798
PACU SPO2_360	98.70	1.28	98.59	1.29	98.46	1.19	0.658	0.519	0.590	0.253	0.545

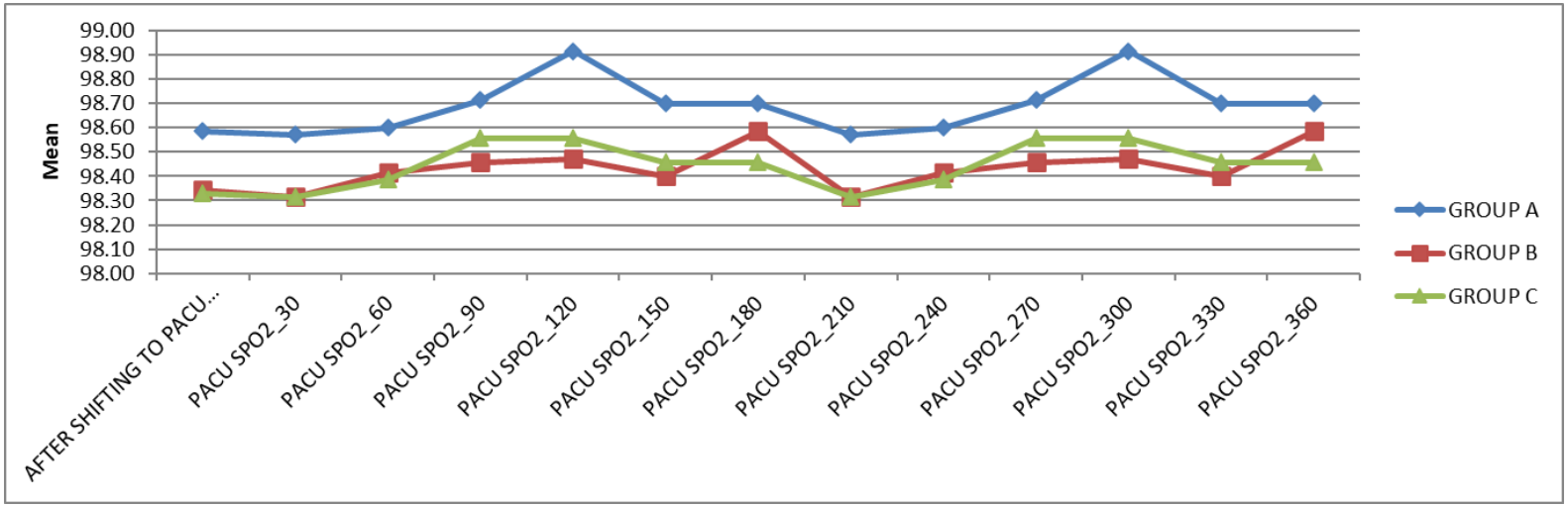


Figure 24: Postoperative trends in mean arterial oxygen saturation (SpO2) amongst the three groups.

25. Postoperative trends in mean respiratory rate amongst the three groups

The mean RR after shifting to PACU was comparable among groups A, B and C (p-value = 0.640). The difference in mean RR was statistically non-significant in all the three groups at all time intervals during the observation period in PACU (p-value>0.05).

Table 25: Postoperative trends in mean respiratory rate amongst the three groups

RR	GROUP A		GROUP B		GROUP C		F	p-value	A VS B	A VS C	B VS C
	Mean	SD	Mean	SD	Mean	SD			p-value	p-value	p-value
PACU RR_00 MIN	17.49	1.20	17.29	1.36	17.46	1.48	0.447	0.640	0.383	0.901	0.454
PACU RR_30 MIN	17.49	1.15	17.29	1.36	17.37	1.34	0.424	0.655	0.360	0.601	0.695
PACU RR_60 MIN	17.46	1.16	17.29	1.36	17.46	1.47	0.383	0.683	0.450	1.000	0.450
PACU RR_90 MIN	17.46	1.16	17.29	1.36	17.43	1.45	0.333	0.717	0.447	0.899	0.526
PACU RR_120 MIN	17.46	1.16	17.29	1.36	17.44	1.46	0.355	0.701	0.448	0.950	0.487
PACU RR_150 MIN	17.43	1.22	17.29	1.36	17.40	1.42	0.224	0.800	0.528	0.900	0.614
PACU RR_180 MIN	17.46	1.16	17.29	1.36	17.31	1.31	0.359	0.699	0.430	0.511	0.895
PACU RR_210 MIN	17.49	1.20	17.29	1.36	17.46	1.48	0.447	0.640	0.383	0.901	0.454
PACU RR_240MIN	17.49	1.15	17.29	1.36	17.37	1.34	0.424	0.655	0.360	0.601	0.695
PACU RR_270 MIN	17.46	1.16	17.29	1.36	17.46	1.47	0.383	0.683	0.450	1.000	0.450

PACU RR_300 MIN	17.46	1.16	17.29	1.36	17.43	1.45	0.333	0.717	0.447	0.899	0.526
PACU RR_330 MIN	17.46	1.16	17.29	1.36	17.44	1.46	0.355	0.701	0.448	0.950	0.487
PACU RR_360 MIN	17.43	1.22	17.29	1.36	17.40	1.42	0.224	0.800	0.528	0.900	0.614

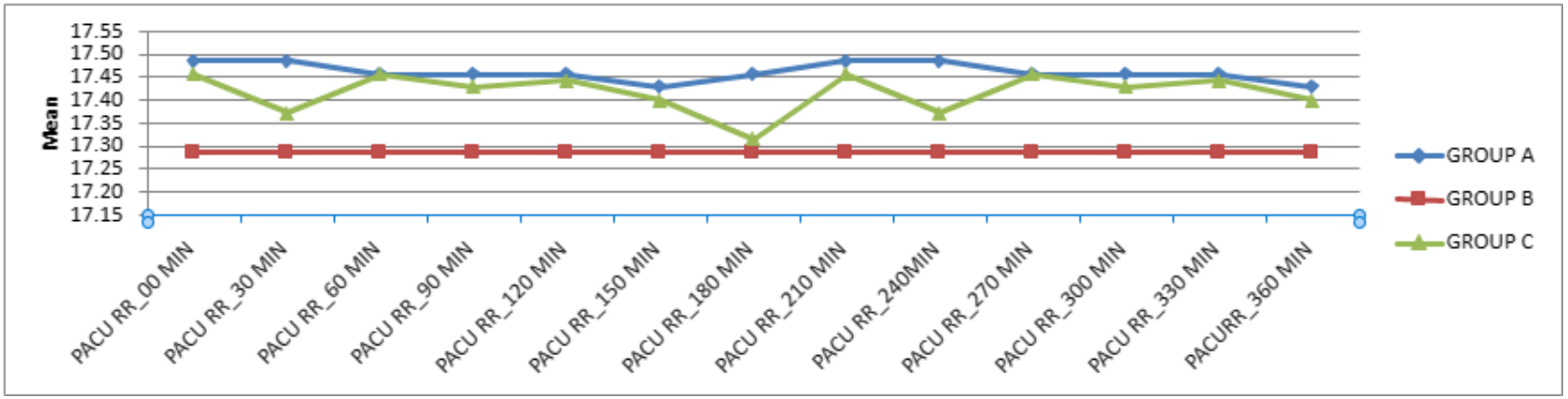


Figure 25: Postoperative trends in mean respiratory rate amongst the three groups

DISCUSSION

Spinal anesthesia is associated with a high incidence of post-anaesthesia shivering, reported in up to 40%-60% in various studies.[1,2,32] Despite the use of various non pharmacological measures like use of pre- warming, warm iv fluid administration, forced air warming devices, shivering still occurs in a large number of patients, necessitating use of pharmacological means. A wide variety of drugs from different classes have been used for the prevention and management of PAS which include various classes of drugs like opioids, alpha-2 agonists, cholinesterase inhibitors, NMDA antagonists, and several others.[20] However, the problems with most of these agents are the potential adverse effects associated with their usage especially sedation, nausea/vomiting and hypotension.

This makes 5-HT3-receptor antagonists like ondansetron, granisetron, palonosetron an attractive and alternate choice for prophylaxis and treatment of PAS.[1,14,38] The mechanism of 5-HT3-receptor antagonists in preventing postspinal shivering is still not clearly understood but is thought to be related to inhibition of serotonin reuptake on the preoptic anterior hypothalamic region.[2]

The present study was undertaken to compare two of the commonly available and widely used 5 HT3 receptor antagonists. The dose of ondansetron used in our study was in accordance with the available literature.[32-35] Powell et al compared 2 doses of ondansetron (4mg and 8mg) for the prevention of shivering and found that 8mg ondansetron was more effective than 4mg.[32] Many authors including Nallam et al, Kelsaka et al, Shakya et al, Botros et al, Sharma et al have also used ondansetron in a dose of 8 mg and found it to be efficacious in the prevention of PAS.[1,33-35]

The dose of palonosetron 75 mcg, used in our study was in accordance with the available literature regarding PAS.[13,14] Sharma et al compared the efficacy of palonosetron 75 mcg with ondansetron

8mg for the prevention of shivering after spinal anaesthesia.[14] Jo et al evaluated the efficacy of palonosetron 75 mcg for prevention of shivering after general anaesthesia.[13]

All the three groups were similar with regard to age, height, weight and BMI distribution. Similarly, gender and ASA physical status were also comparable in all the three groups. Similar gender distribution of patients among the three groups is important. This is because shivering threshold varies with gender, females having a higher threshold for shivering.[39] Patients with more than ASA class III were not enrolled for the study as this group of patients are at increased risk of complications due to shivering.

The operating room temperature in all the three groups was maintained between 21-23 °C to ensure uniformity in all the patients. To avoid any confounding due to non-pharmacological means, patients were not put on forced hot air devices and iv fluid was administered at room temperature. The duration of surgery and spinal anaesthesia was statistically similar in all the groups highlighting uniform and random distribution of patients in all three groups.

INCIDENCE OF SHIVERING

We noted a highly significant reduction in the incidence of shivering in group A (ondansetron) as compared to group C (normal saline) group. The incidence was reduced to 12.9% in group A as compared to 42.9% in group C. Nallam et al, Kelsaka et al, Shakya et al, Botros et al and Sharma et al also reported the significant reduction in the incidence of shivering post spinal anaesthesia in ondansetron group as compared to normal saline group, which is similar to our study.[1,33-36]

In our study, the incidence of shivering was reduced to 22.9% in group B (palonosetron) as compared to 42.9% in group C (normal saline). This suggests that prophylactic administration of palonosetron 75mcg is efficacious in reducing the incidence of shivering compared to placebo. However, Jo et al in his studies reported that prophylactic

administration of palonosetron 75 mcg did not reduce the incidence of postanaesthetic shivering.[13,15] The authors found that the incidence of shivering was comparable in palonosetron and placebo groups, in patients undergoing gynecological laparoscopic surgery under general anaesthesia.[13] Jo et al, in another study, reported that the incidence of PAS was comparable in both palonosetron and placebo groups, in elderly patients undergoing laparoscopic cholecystectomy under general anaesthesia.[15] These findings of Jo et al were surprising considering that mechanism of action of palonosetron and ondansetron are similar at preoptic part of anterior hypothalamus and spinal cord and previous studies have demonstrated the efficacy of ondansetron in preventing PAS.[2]

The difference in the results of Jo et al from present study could be due to the fact that study by Jo et al, in 2013 was conducted in gynecological laparoscopic surgeries which are of shorter duration. In addition, warming mattress containing circulating water at 38°C was deployed whenever core temperature fell below 35 °C intraoperatively. In PACU, a forced-air warmer was applied to patients when tympanic temperature fell below 36°C.[13] The above three factors, probably did not allow hypothermia to set in, which is prelude to perioperative shivering.

Similarly, in the other study by Jo et al, in 2016, was conducted in elderly age group posted for laparoscopic cholecystectomy. Again, the patients were warmed intraoperatively when core temperature fell below 35°C and forced-air warmers were used postoperatively when tympanic temperature fell below 36°C. In addition, the elderly age group have decreased threshold to shivering, decreased response to vasoconstriction, decreased associated heat production and decreased shivering. These might have been a confounding factor in the incidence of shivering. [15]

In our study, incidence of shivering was 12.9% in group A (ondansetron) which was comparable to 22.9% in group B

(palonosetron). There is only one study which compared the efficacy of ondansetron and palonosetron in preventing shivering under spinal anaesthesia.[14] Sharma et al reported that incidence of shivering was significantly lower in palonosetron group as compared to ondansetron group.[14] Results of our study did not corroborate with the results of study by Sharma et al as their study included a specific subset of pregnant patients only. There are not enough studies comparing the efficacy of ondansetron and palonosetron.

SEVERITY OF SHIVERING

The patients who experienced grade 3 or above were considered to have severe shivering. In our study, the severity of shivering was reduced in group A (ondansetron) and group B (palonosetron) as compared to group C (normal saline). We observed the severity of shivering was significantly reduced to 4.3% in group A (ondansetron) compared to 37.1% in group C (normal saline). Kelsaka et al observed significant reduction in the severity of shivering among ondansetron group as compared to placebo, these findings being similar to our results.[33] Nallam et al and Sharma et al also reported that administration of prophylactic ondansetron significantly reduced the severity of shivering, which was in concordance with our results.[1,33-34,36]

In our study, we observed that the severity of shivering in group B (palonosetron) was significantly lowered to 7.2% as compared to 37.1% in group C (placebo group). However, Jo et al reported the severity of shivering was similar among the palonosetron and placebo group.[13] The difference in results of Jo et al from ours could be explained by the fact that, Jo et al used non pharmacological methods for warming whenever core body temperature fell below 35°C.[13]

Reduction of incidence and severity of PAS after ondansetron and palonosetron administration is important as this has the potential to reduce complications associated with PAS which include increased

oxygen consumption, increased carbon dioxide production, lactic acidosis.[2]

In our study, we observed that the severity of shivering was comparable in group A and group B. Sharma et al found that palonosetron is efficacious as prophylaxis for PAS.[14] However, we found efficacy of ondansetron for prevention of PAS better than palonosetron, but subset of group was non-pregnant whereas they compared pregnant patients so it is plausible that higher incidence of shivering is due to their altered hormonal profile. So, more studies may need to be planned to elucidate the efficacy among ondansetron and palonosetron in prevention of PAS.

HEMODYNAMIC CHANGES

Hemodynamic parameters like heart rate, systolic blood pressure, diastolic blood pressure and mean arterial pressure were monitored every 5 minutes throughout the observation period. There was no significant variation in the mean heart rate at baseline amongst all the three groups. There was a slight fall in mean heart rate of the patients, over time in all three groups after SAB. There was no significant variation in mean heart rate amongst group A, B and C at any time interval during the observation period. This was similar to studies conducted by Jo et al and Sharma et al, where authors found no intergroup difference in the hemodynamic variables between study groups.[13,36]

In our study, bradycardia was observed in one out of 70 patients in group A and one out of 70 patients in Group C. For each episode of bradycardia, atropine 0.6 mg was administered. In group B, none of the patients had bradycardia. The difference in the incidence of bradycardia was statistically not significant among all the three groups. Kelsaka et al found no significant difference in the incidence of bradycardia between ondansetron and placebo group, which was in accordance to our study. [33] Jo et al found no significant difference in

heart rate in palonosetron and placebo groups, which was similar to our study.[15]

There was no significant difference in the baseline blood pressure of the patients in the three groups. The mean SBP, DBP and MAP at baseline were comparable in all the three groups. There was a slight decrease in blood pressure in all three groups over time after SAB. Twenty patients (28.6%) in group A and twenty-two patients (31.45%) in group B and twenty-five patients (35.7%) required intervention in the form of iv ephedrine 6 mg for the fall in blood pressure. The incidence of hypotension was similar in all three groups.

However, Nallam et al and Sharma et al found the incidence of hypotension to be lower in patients receiving ondansetron prophylaxis.[1,36] In contrast, Shakya et al found the incidence of hypotension to be comparable in both ondansetron and placebo group which was similar to our finding.[34] It is important to note that Nallam et al and Sharma et al enrolled pregnant patients posted for LSCS while our study only had non pregnant adults. The pregnant patients posted for LSCS under SAB are more prone to hemodynamic changes due to the inherent nature of surgery and amount of blood loss associated with it. There is lack of consensus on the hemodynamic effects of 5HT3 antagonists in the settings of SAB.[1,34,36] Therefore, more studies need to be performed to obtain conclusive evidence on hemodynamic changes.

ADVERSE EFFECTS AND THEIR TREATMENT

The incidence of nausea and vomiting was significantly lower in groups A and B compared to C. The incidence of nausea and vomiting was comparable in group A and group B. Nallam et al, Botros et al and Sharma et al observed significant reduction in the incidence of nausea and vomiting in ondansetron as compared to placebo group, which was similar to our study.[1,35-36] Jo et al found incidence of nausea and vomiting to be higher in control group as compared to palonosetron group, which was in concordance to our study.[13]

In our study, the incidence of dizziness/ sedation (MOSS A≤ 4) was significantly higher in group C as compared to group A and B. The incidence of dizziness/ sedation (MOSS A≤ 4) was similar in group A and B. There were no cases of oversedation. The high incidence in Group C could be attributed to higher incidence and severity of shivering which resulted in increased consumption of rescue treatment (Inj. Tramadol 50 mg) and pertaining to sedation as the adverse effect. The sedative effects of Tramadol have been well described in the literature.[25]

Thus, we conclude that the prophylactic iv administration of ondansetron and palonosetron significantly reduces the incidence of shivering in patients undergoing lower limb surgeries under spinal anaesthesia with added prophylaxis against nausea/vomiting and sedation.

It is pertinent to note that the present study has few limitations.

1. Core body temperature was measured from tympanic membrane using infrared thermometer. There can be certain inaccuracies and limitations of using this technique. Core body temperature measurement using rectal or esophageal site may have yielded more accurate data. However, measurement from these sites is invasive and not acceptable to all patients. There can be risk of injury as well. Therefore, we opted for tympanic membrane temperature monitoring. Many studies on peri-operative shivering have been conducted using tympanic membrane temperature measurements, making this an acceptable choice.
2. There could have been significant seasonal variation of temperature of iv fluids and irrigation fluids, according to the place of their storage. This was difficult to account for; hence we did not measure the temperature of these fluids, which can be considered a limitation of the present study.

3. Our study included surgeries under SAB; therefore, more studies are required to prove the efficacy in different surgeries requiring general anaesthesia as well.

SUMMARY AND CONCLUSION

The present study was conducted in the Department of Anaesthesia, Dayanand Medical College and Hospital, Ludhiana after approval from Institutional Ethics Committee. Two hundred and ten ASA I-III patients of age 18 to 60 years, scheduled for elective lower limb surgeries under spinal anaesthesia were enrolled for this prospective, randomized, double blinded study. The patients were randomly divided into three groups of 70 patients each through computer generated random numbers. The study drug was administered 5 minutes before spinal anaesthesia.

Group A – patients received iv ondansetron 8 mg.
Group B – patients received iv palonosetron 75 µg.
Group C – patients received iv normal saline (placebo).
Vital parameters including heart rate, systolic blood pressure, diastolic blood pressure, mean arterial pressure, respiratory rate, oxygen saturation, core and peripheral temperature were recorded. The patients were observed for any episode of shivering, which was graded as per Wrench (Appendix table 1) throughout the observation period of 6 hours.
The following conclusions were drawn:

- All the three groups were comparable with respect to demographic profile (mean age, weight, height, BMI and gender), ASA physical status, duration of spinal anaesthesia and duration of surgery.
- The intraoperative mean SBP, DBP, MAP, HR and SpO2 were statistically comparable among all the three groups, suggesting that in our study both ondansetron and palonosetron did not have any adverse hemodynamic effect in the doses administered.
- The trends in mean forehead and tympanic membrane temperature recordings were comparable among the three groups A, B and C (p-value>0.05)

- 9 patients (12.9%) in group A; 16 patients (22.9%) in group B; and 30 patients (42.9%) in group C experienced shivering. The incidence of shivering was found to be significantly lower in groups A and B as compared to group C (p-value=0.001). The incidence of shivering in group A was comparable to group B.
- The patients who experienced grade 3 or above were considered to have severe shivering. 4.3% in group A, 7.2% in group B and 37.1% in group C experienced severe shivering. The severity of shivering was observed to be significantly lower in groups A and B compared to group C (p-value=0.001 and p-value=0.003) The severity of shivering was comparable in group A and group B (p-value>0.05)
- The mean dose of tramadol consumption was found to be significantly lower in groups A and B as compared to group C (p-value=0.001 and p-value=0.001 respectively) The mean dose of tramadol consumption in group A and B was comparable (p-value=0.631)
- The time taken to terminate shivering after rescue drug were comparable among the three groups A, B and C. (p-value>0.05).
- The incidence if nausea/ vomiting were significantly lower in groups A and B as compared to group C (p-value=0.001) Nausea and vomiting was comparable between the group A and group B (p-value>0.05)
- The patients in groups A and B reported had lesser incidence of dizziness/sedation compared to group C (p-value=0.014), while other side effects (hypotension and bradycardia) were not statistically significant.

Hence from our study we conclude that the prophylactic iv administration of both ondansetron and palonosetron are more efficacious than placebo for prevention of shivering in patients undergoing lower limb surgeries under spinal anaesthesia. Both of these drugs were devoid of sedation as well as for nausea and vomiting

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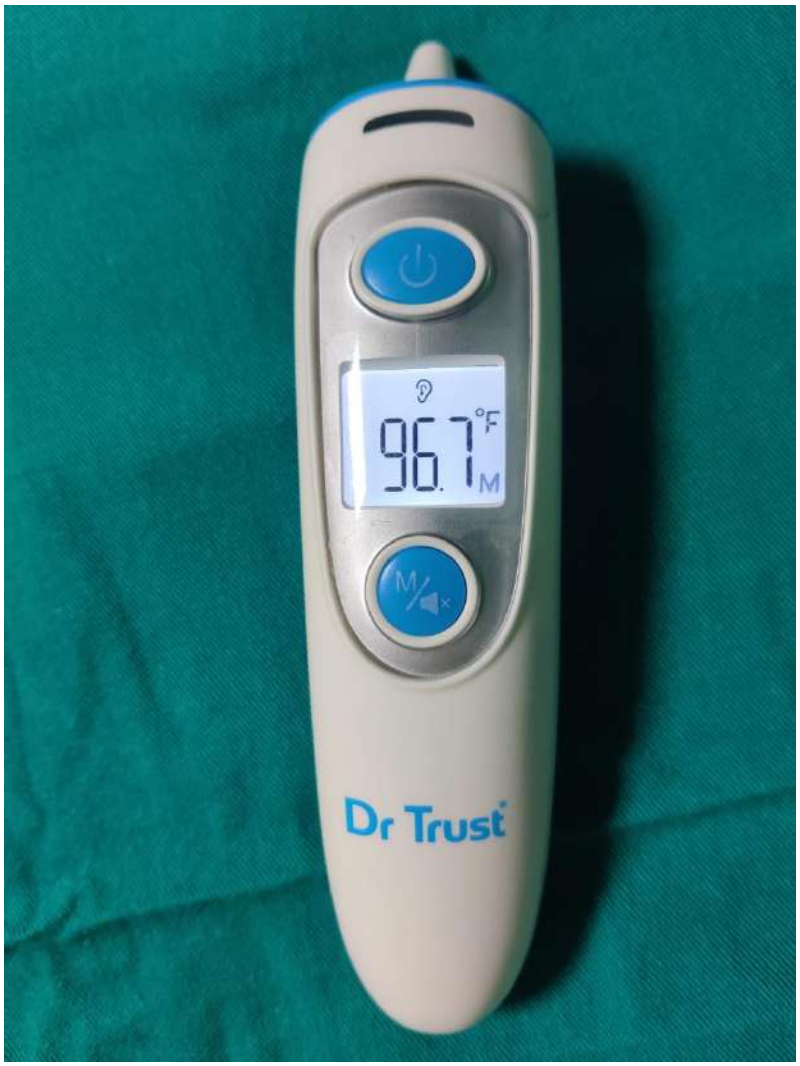

FIGURE 1. INSTRUMENT USED FOR TYMPANIC MEMBRANE AND FOREHEAD TEMPERATURE MEASUREMENT

PROFORMA

S.No	MRD NO.
Name	Randomization no.
Age / sex	
Diagnosis	Proposed Surgery
Weight	Height
ASA	Anesthesia start: Date/Time
Highest dermatomal level	Surgery start Date / time
Surgery finish Date/ time	Duration of Surgery
Duration of Anesthesia	Operating room temperature
Operating room humidity	Date/time of shifting to PACU

Signature of Candidate **Signature of Supervisor**

Intra-operative monitoring

Time (Min)	HR/min	SBP (mmHg)	DBP (mmHg)	MAP (mmHg)	RR/min	SpO2 (%)	Any remarks
Baseline							
0 (immediately after spinal)							
5							
10							
15							
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							
75							
80							
85							
90							
95							
100							
105							
110							
115							
120							
125							
130							
135							

Signature of Candidate

Signature of Supervisor

140							
145							
150							
Vital monitoring in PACU							
180							
210							
240							
270							
300							
330							
360							

Temperature monitoring (in Fahrenheit)

Time (min)	Core body Temperature (Fahrenheit)	Peripheral temperature (Fahrenheit)	Sedation score (OAA)
0			
30			
1 hour			
1 hours 30 min			
2 hours			
2 hours 30 min			
3 hours			
3 hours 30 min			
4 hours			
4 hours 30 min			
5 hours			
5 hours 30 min			
6 hours			

Signature of Candidate **Signature of Supervisor**

Shivering

Time of onset of shivering (in min)	**Grade of shivering** (As per Wrench)	**Rescue Treatment administered**	**Time to disappearance of shivering** (in min)	**Need for repeat dose of rescue treatment**

Adverse effects	**Time of adverse effect**	**Treatment administered**
Bradycardia		
Hypotension		
Nausea/vomiting		
Dizziness		
Any other		

Signature of Candidate **Signature of Supervisor**

Appendix

Table 1

Wrench grade of shivering

Clinical Symptoms.	Grade
Without shivering.	0
Occurrence of one or more of the following: Piloerection, Peripheral vasoconstriction	1
Visible muscle activity limited to one muscle group.	2
Visible muscle activity more than one muscle group	3
Gross muscular activity involving the whole body	4

Table 2

Modified observers assesment of alertness sedation scale – MOSS A

Score	Responsiveness
6	Agitated
5	Responds readily to name spoken in normal tone
4	Lethargic response to name spoken in normal tone
3	Responds only after name is called loudly and / or repeatedly
2	Responds only after mild prodding or shaking
1	Does not respond after mild prodding or shaking
0	Does not respond to deep stimulus

Signature of Candidate **Signature of Supervisor**

KEY TO MASTER CHART

% - Percentage

^{0}C - Degree centigrade

^{0}F - Degree fahrenheit

ASA - American society of anesthesiologists

BMI - Mean body index

Y - Yes

DBP - Diastolic blood pressure

HR - Heart rate

iv - Intravenous

MAP - Mean arterial pressure

Mg - Milligram

Min - Minutes

mmHg- Millimeter of mercury

NIBP - Non-invasive blood pressure

ORT - Operation room temperature

PT/INR- Prothrombin time and international normalized ratio

RR - Respiratory rate

SAB - Subarachnoid block

SBP - Systolic blood pressure

SD - Standard deviation

SpO2 - Arterial haemoglobin oxygen saturation

Temp - Temperature

S.no	Name	MRD	Age	Sex	HEIGHT (Cms)	WEIGHT	BMI	diagnosis	proposed surgery	ASA	GROUP	anesthesia start : date / time	highest dermatomal level	duration of surgery (minutes)	Duration of Spinal Anaesthesia (minutes)	Operating room temperature (°C)	HR (Base line)	HR 0	HR 5	HR 10	HR 15	HR 20	HR 25	HR 30	HR 35	HR 40	HR 45	HR 50	HR 55	HR 60	HR 65	HR 70	HR 75	HR 80	HR 85	HR 90	HR 95	HR 100	HR 105	HR 110	HR 115	HR 120	HR 125	HR 130
1	KK	1067262	50	F	177	65	20.7	#DISTAL SHAFT OF FEMUR	CRIF	1	B	30/3/21 08:35AM	T6	90	190	22	120.0	120.0	118	110	108	106	106	105	105	106	104	105	103	103	104	103	103	103	105	104	-	-	-	-	-	-	-	-
2	Ak	1057919	28	M	155	75	31.2	wound on rt ankle	debridement	1	A	30/3/21 09:30AM	T8	60	180	21	76.0	75.0	74	74	72	74	76	72	74	76	78	76	72	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	N	696396	38	F	161	70	27.0	closed fracture of proximal tibia	Crif proximal tibia	2	B	30/03/21 10:25AM	T8	70	190	21	97.0	95.0	96	94	94	98	96	99	98	99	96	92	90	92	94	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	PS	1025679	21	M	171	70	23.9	f/u/c/o Tibia Plating	wound wash	1	A	30/03/21 10:30AM	T6	60	180	22	90.0	84.0	78	74	76	80	72	62	64	63	64	67	66	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	KK	705637	56	M	173	60	20.0	p/o/c/o exfixation	skin grafting+sinus excision	3	C	31/03/21 01:00PM	T10	60	170	21	109.0	124.0	130	128	122	120	116	110	112	108	100	104	112	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	SU	1073400	21	F	156	74	30.4	RIGHT MENISCUS INJURY	RIGHT ARTHROSCOPIC REPAIR	2	B	03-04-2021 12:15	T10	90	180	21	102.0	100.0	98	98	96	94	96	94	90	84	88	90	92	86	84	86	86	92	94	84	-	-	-	-	-	-	-	-
7	AS	8227	29	M	162	110	41.9	fracture tibia	ORIF plating Tibia	1	A	06/04/21 09:20AM	T10	120	210	22	116.0	115.0	113	110	112	118	114	112	120	122	116	118	110	106	110	106	108	110	112	124	120	122	116	118	110	106	-	-
8	NS	400011	24	F	154	56	23.6	ACL , PCL TEAR	ARTHROSCOPIC REPAI	2	B	14-04-2021 11:15	T8	90	170	20	110.0	109.0	107	113	106	104	102	98	97	96	99	96	92	88	90	88	88	92	98	90	-	-	-	-	-	-	-	-
9	SG	1101250	56	M	172	107	36.2	FRACTURE tibia	Tibia plating	2	C	03/05/21 10:15AM	T10	120	190	22	64.0	65.0	61	58	58	56	56	58	54	58	56	54	56	60	62	60	60	56	58	56	54	58	56	54	56	60	-	-
10	SS	1094272	42	M	175	99	32.3	fracture both bone leg	distal tibia plating left	1	A	08/05/21 11:15AM	T8	120	200	22	112.0	110.0	98	100	96	91	86	92	96	80	77	88	90	80	82	80	80	90	92	82	96	80	77	88	90	80	-	-
11	PK	1089522	56	M	170	86	29.8	Left gangrenous foot	left amputation foot	3	A	19/05/21 10:10AM	T6	105	210	21	65.0	69.0	70	64	63	60	59	57	59	59	60	60	59	57	60	57	57	59	57	60	59	59	60	-	-	-	-	-
12	JS	1110272	60	M	165	95	34.9	Lacerated wound	SUTURING	3	C	19/05/21 10:25AM	T10	75	190	21	90.0	90.0	88	86	84	82	84	82	84	82	80	82	84	82	80	82	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	BS	1095428	25	M	162	90	34.3	LEFT FEMUR WITH EXFIX IN SITU	EX-FIX REMOVAL & ORIF FEMUR	2	C	26-05-2021 09:20	T10	150	180	23	76.0	75.0	81	72	74	84	85	78	81	78	82	84	72	76	78	76	76	72	78	78	81	78	82	84	72	76	78	84
14	KS	708504	24	M	170	80	27.7	Left implant tibia	implant removal	2	C	26/05/21 11:00AM	T10	90	170	22	85.0	86.0	70	65	63	65	61	69	68	69	66	68	67	68	66	68	67	68	66	63	-	-	-	-	-	-	-	-
15	SS	1031328	28	M	163	75	28.2	Left knee collection	left knee arthrotomy	1	B	27/05/21 11:00AM	T10	60	170	22	78.0	75.0	70	70	66	67	64	66	62	62	58	62	63	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	GS	1110975	18	M	160	70	27.3	POCO RIGHT LL INJURY	skin grafting	2	C	27-05-2021 13:00	T10	60	160	21	90.0	86.0	86	89	94	82	86	88	90	92	96	94	92	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	BS	1126895	56	M	161	65	25.1	HIP PAIN	DYNAMISATION	2	B	25-06-2021 09:45	T10	90	170	22	96.0	94.0	90	88	86	77	76	75	76	77	73	68	70	71	69	71	71	70	75	69	-	-	-	-	-	-	-	-
18	BS	403718	53	M	170	56	19.4	FUCO FEMUR IMPLANT	implant removal	2	C	25-06-2021	T8	100	190	22	64.0	65.0	60	59	57	56	54	54	56	56	57	59	60	62	60	62	62	60	54	56	56	56	-	-	-	-	-	-
19	YS	538338	32	M	179	85	26.5	left femur implant	implant removal	2	B	26-06-2021 09:00	T10	75	180	23	68.0	65.0	66	62	61	64	64	62	68	62	64	66	69	61	62	61	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	DS	1127278	47	M	170	85	29.4	PSOAS ABSECSS	ABSCESS DRAINAGE	2	A	26-06-2021 09:45	T10	60	170	22	76.0	72.0	75	72	71	74	73	70	68	66	64	72	64	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	GS	1121887	31	M	172	66	22.3	PATELLAR TENDON INJURY	PATELLAR TENDON REPAIR	1	C	12-07-2021 09:15	T8	150	160	22	92.0	90.0	92	88	90	88	86	87	84	84	86	84	84	82	80	82	82	84	87	85	84	84	86	84	84	82	83	84
22	KS	836758	23	M	163	74	27.9	RIGHT KNEE PAIN	QUADRIPLASTY	1	B	15/07/21 09:00AM	T6	120	170	21	70.0	72.0	74	80	84	80	76	74	70	68	66	70	74	78	76	78	78	74	74	76	70	68	66	70	74	78	-	-
23	ML	1137074	34	M	165	64	23.5	LEFT BB FRACTURE	LEFT TIBIA EXTERNAL FIXATOR APPLICATION	1	C	15-07-2021 13:00	T10	120	180	23	72.0	70.0	74	70	68	66	70	72	74	74	76	70	67	70	69	67	68	67	72	73	74	74	76	70	67	66	-	-
24	SK	1137152	40	M	167	60	21.5	ACL Tear	ACL tear repair	1	B	15/07/21 02:25PM	T10	90	190	21	68.0	76.0	72	68	64	66	66	65	64	63	62	62	60	62	63	64	64	62	64	70	-	-	-	-	-	-	-	-
25	PK	1138785	23	F	156	70	28.8	LEFT KNEE PAIN	LEFT KNEE MENINSCAL BIOPSY	1	C	19-07-2021 13:00	T10	90	190	22	120.0	118.0	115	113	98	95	94	94	98	96	94	94	98	97	96	97	96	98	97	94	-	-	-	-	-	-	-	-
26	JS	1135243	57	M	169	84	29.4	POCO BB LEG RT SIDE	DEBRIDEMENT & VAC APPLICATION	2	C	20-07-2021 15:15	T8	105	190	21	92.0	100.0	102	104	100	99	96	99	102	100	99	98	96	96	92	96	96	96	99	92	102	100	99	-	-	-	-	-
27	VS	1066509	30	M	165	76	27.9	RIGHT MENISCUS INJURY	RIGHT ACL REPAIR	1	B	20-07-2021 12:00	T8	90	180	21	78.0	80.0	84	82	86	90	88	86	74	80	78	76	70	82	80	82	82	70	86	84	-	-	-	-	-	-	-	-
28	ML	1137074	34	M	163	94	35.4	POCO EXTERNAL FIXATION TIBIA	VAC DRESSING	2	A	29-07-2021 12:00	T8	60	180	21	96.0	94.0	98	94	96	92	90	93	89	83	82	90	91	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	IS	1142000	32	M	164	85	31.6	OSTEOMYELITIS LEFT LEG	CURETTAGE LEFT TIBIA	2	C	30-07-2021 15:00	T8	60	190	23	91.0	90.0	72	70	68	62	66	72	74	64	62	68	76	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	HC	940869	51	M	171	80	27.4	ACUTE OSTEOMYELITIS RIGHT FOOT	BIOPSY, I& D RIGHT FOOT	1	B	31-07-2021 14:00	T10	60	190	21	92.0	90.0	108	102	98	98	102	108	100	96	98	96	90	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	GS	139513	26	M	163	106	39.9	VARICOSE VEINS	VARICOSE VEINS STRIPPING	2	C	31-07-2021 09:00	T8	120	180	21	88.0	94.0	94	96	90	92	94	90	88	86	84	86	84	86	88	86	86	84	90	88	88	86	84	86	84	86	-	-
32	MS	1146275	32	M	172	86	29.1	FRACTURE PROXIMAL TIBIA LEFT SIDE	EXTERNAL FIXATION TIBIA	1	C	01-08-2021 13:30	T8	120	180	21	110.0	100.0	97	96	94	88	84	86	84	80	82	78	78	76	86	76	76	78	86	86	84	80	82	78	78	76	-	-
33	JS	1148068	26	M	161	70	27.0	PATELLA FRACTURE	TBW PATELLA	1	A	04-08-2021 14:15	T8	90	190	21	80.0	90.0	94	96	99	94	90	88	86	82	88	80	84	82	80	82	82	84	88	80	-	-	-	-	-	-	-	-
34	DK	1148398	59	M	163	63	23.7	FRACTURE PROXIMAL FEMUR	PFN LEFT SIDE	3	C	05-08-2021 09:10	T6	105	190	21	108.0	100.0	106	97	96	94	88	84	86	82	78	72	88	74	86	74	74	88	84	86	86	82	78	-	-	-	-	-
35	PK	1148476	27	M	170	61	21.1	tibia fracture	EXFIX TIBIA	1	B	05-08-2021 15:15	T8	75	180	22	68.0	68.0	69	65	78	80	78	86	88	72	73	68	70	66	68	66	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	HS	1148158	37	M	160	60	23.4	ANKLE INJURY	ANKLE ARTHROTOMY	1	A	05-08-2021 16:00	T10	90	180	21	80.0	90.0	90	92	96	90	88	86	84	82	80	88	86	84	82	84	84	86	86	82	-	-	-	-	-	-	-	-
37	MS	1145103	24	M	170	66	22.8	KNEE INJURY	ACL REPAIR	1	C	06-08-2021 15:45	T10	105	200	21	108.0	112.0	110	102	106	98	92	96	96	90	94	94	90	92	96	92	92	90	96	96	96	90	94	-	-	-	-	-
38	N	464424	51	F	157	74	30.0	OSTEOCHONDRAL DEFECT RIGHT KNEE JOINT	RIGHT KNEE ARTHROSCOPY	2	A	06-08-2021 13:00	T10	90	210	21	76.0	72.0	70	68	72	64	66	65	70	72	68	68	69	68	67	70	72	68	68	68	-	-	-	-	-	-	-	-
39	JS	227880	50	M	159	75	29.7	KNEE PAIN	KNEE ARTHROSCOPY	2	C	07-08-2021 09:45	T10	105	180	22	76.0	84.0	86	82	80	78	74	76	74	72	70	68	74	64	71	64	64	74	76	71	74	72	70	-	-	-	-	-
40	RS	1136285	19	M	168	70	24.8	TA LENGTHENING	TA LENGTHENING	2	A	07-08-2021 11:00	T10	90	170	23	80.0	76.0	68	60	62	58	55	56	54	56	54	56	53	54	58	54	54	53	56	58	-	-	-	-	-	-	-	-
41	DK	1151876	36	M	170	55	19.0	CLOSED FRACTURE SHAFT TIBIA LEFT SIDE	ORIF TIBIA	2	C	10-08-2021 15:50	T8	90	190	21	92.0	100.0	99	90	96	94	92	94	92	90	94	92	92	90	90	90	90	92	94	90	-	-	-	-	-	-	-	-
42	PK	1148476	27	M	162	60	22.9	POCO EXFIX TIBIA	ORIF PROXIMAL TIBIA	2	A	12-08-2021 09:10	T10	120	180	21	87.0	90.0	86	88	90	88	86	82	80	80	78	78	76	76	74	75	76	78	75	74	76	78	78	79	80	78	-	-
43	CS	1154175	45	M	165	65	23.9	TIBIA FRACTURE	EXFIX APPLICATION	2	C	14-08-2021 11:30	T8	105	180	21	98.0	90.0	89	89	80	76	82	88	86	82	84	80	82	80	78	80	80	82	88	84	86	82	84	-	-	-	-	-
44	VK	1158315	30	M	165	84	30.9	FRACTURE BB LEG RIGHT SIDE WITH METAL WORK IN SITU	WOUND EXPLORATION AND DEBRIDEMENT	2	B	24-08-2021 15:30	T8	45	190	22	90.0	94.0	92	90	99	88	86	90	92	90	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	KS	1159025	55	M	161	62	23.9	OPEN FRACTURE RIGHT ANKLE	DEBRIDEMENT AND EXFIX APPLICATION	2	C	24-08-2021 14:15	T10	90	190	21	88.0	92.0	86	89	94	82	86	88	90	92	96	94	92	90	84	90	90	92	88	84	-	-	-	-	-	-	-	-
46	RJ	1154986	58	F	169	67	23.5	p/o/c/o exfixation	tibia plating	2	B	01-09-2021 10:45	T8	90	180	21	98.0	104.0	102	100	101	97	96	98	100	102	96	98	96	98	97	98	98	96	98	98	-	-	-	-	-	-	-	-
47	KS	1163464	56	M	178	90	28.4	closed fracture proximal tibia right	CRIF proximal tibia	3	B	01-09-2021 11:30	T8	70	180	21	76.0	80.0	78	77	79	78	79	80	80	81	81	82	78	77	76	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	B	7553	36	F	153	84	35.9	PROXIMAL TIBIA LEFT SIDE	CRIF	2	B	01-09-2021 11:30	T8	70	170	22	106.0	102.0	106	102	104	102	102	104	100	98	96	98	100	102	104	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	GS	1063201	19	M	162	80	30.5	abscess in tibia	Incision & drainage	2	B	01-09-2021 19:45	T6	45	170	23	90.0	100.0	98	102	101	106	101	98	99	96	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	VS	1166625	32	M	164	70	26.0	RIGHT TIBIA FRACTURE	EXTERNAL FIXATION TIBIA	2	A	03-12-2021 17:45	T8	90	160	21	84.0	90.0	87	87	86	85	85	84	83	84	82	81	80	79	78	79	79	80	84	78	-	-	-	-	-	-	-	-
51	AS	1142848	50	M	166	82	29.8	GANGRENE FOOT	LEFT FOOT AMPUTATION	2	C	04-12-2021 12:45	T8	105	180	21	103.0	100.0	101	101	100	102	103	104	106	104	108	106	103	102	100	102	102	103	104	100	106	104	108	-	-	-	-	-
52	HR	1168231	25	M	163	70	26.3	OSTEOCHONDROMA	EXCISION AND BIOPSY	1	B	08-09-2021 12:15	T8	90	170	21	78.0	80.0	76	75	76	76	75	74	73	73	72	71	70	72	73	72	72	70	74	73	-	-	-	-	-	-	-	-
53	B	7553	36	F	153	73	31.2	tibia fracture	LT TIBIA PLATING	1	B	08-09-2021 12:15	T8	75	180	23	99.0	99.0	97	96	95	95	93	92	91	90	88	87	88	89	92	89	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	MG	1038666	34	M	162	80	30.5	POCO TENSION BAND WIRING	TBW REMOVAL	2	A	10-09-2021 12:00	T8	60	170	23	116.0	115.0	114	116	96	98	94	94	92	94	92	96	98	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	GS	1046678	26	M	165	74	27.2	ILIZAROV RING FIXATOR	READJUSTMENT OF EX -FIX SCREW	2	A	13/09/2021 10:00AM	T6	120	190	22	88.0	90.0	94	90	92	90	84	84	86	84	88	86	88	80	82	80	80	88	84	82	86	84	88	86	88	80	-	-
56	GS	996112	55	M	172	70	23.7	RIGHT KNEE WOUND	DEBRIDEMENT	2	A	13-09-2021 12:45	T8	60	200	23	92.0	100.0	98	96	90	90	86	88	86	88	82	86	82	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	AS	1172707	40	M	168	64	22.7	OPEN FRACTURE PROXIMAL TIBIA LEFT	LT TIBIA PLATING	1	A	13-09-2021 19:40	T8	90	210	22	104.0	99.0	98	86	82	80	76	78	80	70	72	78	73	80	78	80	80	73	78	78	-	-	-	-	-	-	-	-
58	IS	1172828	27	M	164	65	24.2	WET GANGRENE	AMPUTATION RIGHT LEG	2	C	14-09-2021 13:30	T10	120	180	21	110.0	100.0	102	103	98	92	98	96	92	98	96	96	98	92	90	92	92	98	96	90	92	98	96	96	98	92	-	-
59	VS	1173331	46	M	167	80	28.7	RIGHT TIBIA FRACTURE	orif proximal tibia	2	A	15/09/2021 01:45PM	T6	120	190	21	96.0	84.0	76	74	80	72	70	66	68	68	64	70	72	70	69	66	64	65	66	66	68	68	66	68	69	68	-	-
60	AS	1171270	22	M	164	84	31.2	ANKLE FRACTURE	ANKLE SCREW FIXATION	1	C	10-09-2021 14:15	T8	90	210	21	88.0	90.0	88	90	92	90	91	89	88	86	88	90	84	86	83	86	86	84	89	88	-	-	-	-	-	-	-	-

S.no	HR 135	HR 140	HR 145	HR 150	AFTER SHIFTING TO PACU HR 0	PACU HR 30	PACU HR 60	PACU HR 90	PACU HR 120	PACU HR 150	PACU HR 180	PACU HR 210	PACU HR 240	PACU HR 270	PACU HR 300	PACU HR 330	PACU HR 360	SBP Base line	SBP 0	SBP 5	SBP 10	SBP 15	SBP 20	SBP 25	SBP 30	SBP 35	SBP 40	SBP 45	SBP 50	SBP 55	SBP 60	SBP 65	SBP 70	SBP 75	SBP 80	SBP 85	SBP 90	SBP 95	SBP 100	SBP 105	SBP 110	SBP 115	SBP 120	SBP 125	SBP 130	SBP 135	SBP 140	SBP 145
1	-	-	-	-	102	105	90	94	90	88	86	100	100	98	84	86	103	140	124	110	94	102	118	122	125	127	126	124	129	126	122	126	120	123	127	126	127	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	74	76	76	70	78	76	72	76	70	74	72	74	72	124	112	84	116	114	112	110	116	114	118	120	114	112	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	98	92	99	98	96	92	90	96	96	92	90	98	90	154	160	140	150	132	142	132	136	130	128	124	120	116	120	118	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	68	67	63	63	64	67	66	72	64	70	63	64	66	160	158	147	148	150	156	145	150	150	147	146	146	150	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	108	104	103	104	100	104	112	116	90	108	101	106	112	124	110	104	110	116	111	112	110	100	106	108	110	100	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	90	90	84	90	88	90	92	96	86	86	92	90	92	118	108	92	102	116	118	110	106	105	108	100	100	106	108	104	102	106	105	108	100	-	-	-	-	-	-	-	-	-	-	-	-
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31	-	-	-	-	88	86	86	88	84	86	84	94	84	86	84	88	84	178	180	170	166	168	152	148	150	152	160	168	152	148	142	154	150	150	152	160	168	152	148	142	154	150	150	-	-	-	-	-
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S.no	SBP 150	PACU SBP 00	PACU SBP 30	PACU SBP 60	PACU SBP 90	PACU SBP 120	PACU SBP 150	PACU SBP 180	PACU SBP 210	PACU SBP 240	PACU SBP 270	PACU SBP 300	PACU SBP 330	PACU SBP 360	DBP Base line	DBP 0	DBP 5	DBP 10	DBP 15	DBP 20	DBP 25	DBP 30	DBP 35	DBP 40	DBP 45	DBP 50	DBP 55	DBP 60	DBP 65	DBP 70	DBP 75	DBP 80	DBP 85	DBP 90	DBP 95	DBP 100	DBP 105	DBP 110	DBP 115	DBP 120	DBP 125	DBP 130	DBP 135	DBP 140	DBP 145	DBP 150
1	-	127.0	127.0	126.0	127.0	129.0	126.0	122.0	123	122	127	125	127	126	95.0	89.0	89.0	87.0	86.0	82.0	87.0	86.0	82.0	83.0	87.0	90.0	90.0	86.0	89	87	86	82	87	86	-	-	-	-	-	-	-	-	-	-	-
2	-	116.0	114.0	118.0	120.0	114.0	112.0	102.0	114	112	110	116	114	118	80.0	76.0	48.0	74.0	78.0	70.0	68.0	64.0	66.0	64.0	72.0	70.0	68.0	66.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	136.0	130.0	128.0	124.0	120.0	116.0	120.0	132	142	132	136	130	128	98.0	88.0	92.0	100.0	90.0	90.0	86.0	88.0	90.0	84.0	86.0	78.0	74.0	78.0	92	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	150.0	150.0	147.0	146.0	150.0	150.0	156.0	150	156	145	150	150	147	98.0	100.0	86.0	88.0	80.0	86.0	88.0	90.0	93.0	90.0	94.0	96.0	92.0	84.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	110.0	100.0	106.0	108.0	110.0	100.0	108.0	116	111	112	110	100	106	74.0	86.0	66.0	64.0	66.0	60.0	54.0	62.0	68.0	62.0	64.0	62.0	60.0	58.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	106.0	105.0	108.0	100.0	100.0	106.0	108.0	116	118	110	106	105	108	66.0	56.0	70.0	62.0	64.0	60.0	60.0	62.0	68.0	58.0	60.0	64.0	60.0	64.0	70	62	64	60	60	62	-	-	-	-	-	-	-	-	-	-	-	-
7	-	112.0	118.0	124.0	122.0	120.0	112.0	126.0	106	104	110	112	118	124	86.0	67.0	70.0	68.0	52.0	54.0	66.0	64.0	52.0	54.0	56.0	62.0	70.0	74.0	70	68	52	54	66	64	52	54.0	56.0	62.0	70.0	74.0	-	-	-	-	-	-
8	-	155.0	152.0	148.0	146.0	142.0	148.0	149.0	158	156	148	155	152	148	98.0	100.0	100.0	100.0	97.0	92.0	90.0	94.0	90.0	82.0	84.0	80.0	102.0	108.0	100	100	97	92	90	94	-	-	-	-	-	-	-	-	-	-	-	-
9	-	132.0	134.0	132.0	134.0	132.0	133.0	136.0	136	132	132	132	134	132	84.0	90.0	83.0	89.0	88.0	90.0	91.0	78.0	90.0	86.0	92.0	83.0	90.0	89.0	83	89	88	90	91	78	90	86.0	92.0	83.0	90.0	89.0	-	-	-	-	-	-
10	-	136.0	132.0	126.0	123.0	145.0	132.0	122.0	126	119	140	136	132	126	81.0	81.0	84.0	75.0	70.0	52.0	68.0	66.0	70.0	67.0	62.0	62.0	60.0	68.0	84	75	70	52	68	66	70	67.0	62.0	62.0	60.0	68.0	-	-	-	-	-	-
11	-	120.0	120.0	119.0	119.0	116.0	112.0	116.0	122	120	121	120	120	119	58.0	47.0	40.0	62.0	57.0	54.0	62.0	56.0	54.0	52.0	55.0	54.0	56.0	52.0	40	62	57	54	62	56	54	52.0	55.0	-	-	-	-	-	-	-	-	-
12	-	110.0	112.0	118.0	110.0	116.0	118.0	120.0	116	120	112	110	112	118	80.0	86.0	82.0	80.0	84.0	68.0	61.0	72.0	74.0	76.0	70.0	68.0	64.0	70.0	82	80	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	106	99.0	106.0	107.0	110.0	103.0	106.0	100.0	108	100	106	99	106	107	80.0	60.0	80.0	76.0	74.0	60.0	64.0	62.0	60.0	62.0	59.0	68.0	66.0	56.0	80	76	74	60	64	62	60	62.0	59.0	68.0	66.0	56.0	80	76	74	62	60	62.0
14	-	108.0	103.0	99.0	97.0	97.0	99.0	97.0	108	103	101	108	103	99	100.0	82.0	83.0	69.0	63.0	63.0	61.0	64.0	61.0	63.0	63.0	61.0	62.0	63.0	83	69	63	63	61	64	-	-	-	-	-	-	-	-	-	-	-	-
15	-	111.0	112.0	113.0	121.0	130.0	138.0	150.0	109	103	115	111	112	113	98.0	62.0	66.0	70.0	64.0	63.0	75.0	69.0	69.0	67.0	72.0	80.0	82.0	90.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	102.0	104.0	101.0	102.0	110.0	112.0	114.0	102	104	101	102	104	101	72.0	68.0	60.0	61.0	68.0	54.0	56.0	68.0	54.0	62.0	68.0	74.0	70.0	71.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	116.0	116.0	115.0	115.0	102.0	108.0	105.0	119	120	117	116	116	115	86.0	84.0	82.0	84.0	86.0	89.0	82.0	80.0	78.0	76.0	73.0	78.0	68.0	65.0	82	84	86	89	82	80	-	-	-	-	-	-	-	-	-	-	-	-
18	-	160.0	157.0	151.0	162.0	164.0	168.0	152.0	157	159	166	160	157	151	70.0	69.0	69.0	73.0	67.0	67.0	68.0	67.0	64.0	74.0	72.0	64.0	62.0	68.0	69	73	67	67	68	67	64	74.0	-	-	-	-	-	-	-	-	-	-
19	-	100.0	98.0	106.0	104.0	106.0	110.0	112.0	100	94	102	100	98	106	68.0	66.0	64.0	58.0	54.0	56.0	58.0	54.0	64.0	66.0	68.0	56.0	54.0	67.0	64	58	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	154.0	152.0	150.0	150.0	148.0	146.0	152.0	150	158	159	154	152	150	100.0	104.0	106.0	104.0	102.0	97.0	97.0	96.0	84.0	76.0	72.0	74.0	72.0	97.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	100	101.0	100.0	100.0	102.0	100.0	105.0	102.0	98	103	106	101	100	100	70.0	53.0	60.0	61.0	60.0	60.0	66.0	63.0	65.0	64.0	66.0	65.0	65.0	69.0	60	61	60	60	66	63	65	64.0	66.0	65.0	65.0	69.0	60	61	60	63	65	64.0
22	-	112.0	110.0	106.0	102.0	100.0	110.0	112.0	100	110	106	112	110	106	74.0	70.0	68.0	66.0	68.0	54.0	60.0	72.0	74.0	68.0	70.0	74.0	88.0	82.0	68	66	68	54	60	72	74	68.0	70.0	74.0	88.0	82.0	-	-	-	-	-	-
23	-	130.0	134.0	128.0	132.0	136.0	140.0	135.0	130	132	133	130	134	128	80.0	86.0	80.0	100.0	86.0	68.0	64.0	88.0	72.0	74.0	80.0	86.0	90.0	90.0	80	100	86	68	64	88	72	74.0	80.0	86.0	80.0	78.0	-	-	-	-	-	-
24	-	132.0	130.0	128.0	136.0	132.0	131.0	134.0	126	122	121	132	130	128	70.0	78.0	66.0	72.0	74.0	71.0	64.0	88.0	84.0	82.0	88.0	98.0	86.0	82.0	66	72	74	71	64	88	-	-	-	-	-	-	-	-	-	-	-	-
25	-	104.0	100.0	102.0	110.0	100.0	99.0	105.0	115	114	122	104	100	102	74.0	72.0	87.0	76.0	81.0	72.0	73.0	73.0	76.0	68.0	74.0	75.0	70.0	68.0	87	76	81	72	73	73	-	-	-	-	-	-	-	-	-	-	-	-
26	-	118.0	116.0	110.0	118.0	120.0	136.0	124.0	122	128	122	118	116	110	70.0	68.0	60.0	52.0	54.0	60.0	60.0	60.0	58.0	62.0	64.0	72.0	70.0	70.0	60	52	54	60	60	60	58	62.0	64.0	-	-	-	-	-	-	-	-	-
27	-	130.0	124.0	122.0	120.0	124.0	132.0	130.0	120	130	136	130	124	122	68.0	88.0	74.0	86.0	86.0	84.0	88.0	78.0	86.0	88.0	98.0	88.0	86.0	86.0	74	86	86	84	88	78	-	-	-	-	-	-	-	-	-	-	-	-
28	-	106.0	113.0	117.0	114.0	111.0	101.0	110.0	121	108	110	106	113	117	80.0	84.0	82.0	60.0	54.0	58.0	60.0	66.0	68.0	71.0	72.0	68.0	67.0	66.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	134.0	138.0	139.0	141.0	138.0	134.0	148.0	138	136	142	134	138	139	94.0	78.0	84.0	80.0	74.0	70.0	82.0	80.0	72.0	88.0	86.0	74.0	70.0	72.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	140.0	136.0	132.0	140.0	133.0	138.0	130.0	128	132	138	140	136	132	100.0	98.0	90.0	86.0	80.0	66.0	98.0	86.0	98.0	96.0	98.0	68.0	86.0	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	150.0	152.0	160.0	168.0	152.0	148.0	142.0	168	152	148	150	152	160	100.0	98.0	99.0	96.0	100.0	88.0	76.0	84.0	88.0	82.0	90.0	88.0	84.0	86.0	99	96	100	88	76	84	88	82.0	90.0	88.0	84.0	86.0	-	-	-	-	-	-
32	-	112.0	100.0	110.0	100.0	100.0	100.0	100.0	111	111	110	112	100	110	82.0	66.0	57.0	66.0	68.0	66.0	62.0	70.0	56.0	64.0	53.0	50.0	56.0	54.0	57	66	68	66	62	70	56	64.0	53.0	50.0	56.0	54.0	-	-	-	-	-	-
33	-	110.0	112.0	108.0	106.0	112.0	104.0	110.0	116	112	100	110	112	108	80.0	90.0	68.0	74.0	68.0	62.0	52.0	54.0	60.0	62.0	56.0	62.0	68.0	74.0	68	74	68	62	52	54	-	-	-	-	-	-	-	-	-	-	-	-
34	-	122.0	120.0	100.0	100.0	110.0	100.0	111.0	122	116	118	122	120	100	86.0	88.0	98.0	66.0	62.0	70.0	56.0	64.0	53.0	56.0	54.0	62.0	58.0	64.0	98	66	62	70	56	64	53	56.0	54.0	-	-	-	-	-	-	-	-	-
35	-	122.0	113.0	112.0	124.0	125.0	120.0	123.0	120	124	120	122	113	112	86.0	89.0	60.0	64.0	68.0	66.0	64.0	60.0	52.0	80.0	78.0	66.0	80.0	88.0	60	64	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	110.0	112.0	106.0	102.0	116.0	118.0	102.0	100	102	108	110	112	106	75.0	78.0	66.0	58.0	64.0	68.0	74.0	72.0	80.0	64.0	62.0	70.0	71.0	66.0	66	58	64	68	74	72	-	-	-	-	-	-	-	-	-	-	-	-
37	-	106.0	102.0	100.0	110.0	112.0	116.0	108.0	106	100	104	106	102	100	70.0	68.0	72.0	68.0	66.0	58.0	60.0	61.0	66.0	68.0	70.0	72.0	72.0	72.0	72	68	66	58	60	61	66	68.0	70.0	-	-	-	-	-	-	-	-	-
38	-	110.0	111.0	106.0	119.0	120.0	115.0	120.0	122	118	112	110	111	106	82.0	86.0	88.0	80.0	74.0	68.0	66.0	68.0	72.0	80.0	88.0	66.0	68	72	88	80	74	68	66	68	-	-	-	-	-	-	-	-	-	-	-	-
39	-	122.0	120.0	120.0	119.0	120.0	120.0	119.0	128	124	120	122	120	120	80.0	80.0	76.0	70.0	70.0	76.0	70.0	60.0	68.0	64.0	80.0	84.0	82.0	80.0	76	70	70	76	70	60	68	64.0	80.0	-	-	-	-	-	-	-	-	-
40	-	115.0	110.0	109.0	108.0	112.0	116.0	114.0	108	105	110	115	110	109	64.0	60.0	52.0	60.0	84.0	54.0	52.0	58.0	54.0	56.0	54.0	58.0	53.0	54.0	52	60	84	54	52	58	-	-	-	-	-	-	-	-	-	-	-	-
41	-	130.0	128.0	140.0	132.0	136.0	134.0	132.0	132	130	132	130	128	140	90.0	96.0	68.0	60.0	68.0	80.0	86.0	88.0	74.0	76.0	74.0	74.0	80.0	86.0	68	60	68	80	86	88	-	-	-	-	-	-	-	-	-	-	-	-
42	-	141.0	140.0	134.0	130.0	129.0	134.0	150.0	158	164	158	141	140	134	80.0	78.0	72.0	76.0	80.0	88.0	80.0	86.0	84.0	90.0	76	80	88	80	72	76	80	88	80	86	84	90.0	72	76	80	86	-	-	-	-	-	-
43	-	130.0	128.0	122.0	124.0	120.0	126.0	132.0	110	126	140	130	128	122	70.0	80.0	60.0	68.0	60.0	86.0	90.0	98.0	80.0	86.0	66.0	86.0	74.0	80.0	60	68	60	86	90	98	80	86.0	66.0	-	-	-	-	-	-	-	-	-
44	-	120.0	120.0	116.0	120.0	122.0	130.0	128.0	120	110	122	120	120	116	90.0	92.0	56.0	68.0	60.0	60.0	68.0	64.0	70.0	68.0	70.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	102.0	106.0	102.0	110.0	112.0	111.0	114.0	102	104	101	102	106	102	70.0	64.0	60.0	61.0	68.0	54.0	56.0	60.0	61.0	68.0	65.0	70.0	72.0	71.0	60	61	68	54	56	60	-	-	-	-	-	-	-	-	-	-	-	-
46	-	112.0	102.0	116.0	111.0	110.0	122.0	133.0	106	119	114	112	102	116	80.0	72.0	68.0	54.0	72.0	70.0	68.0	70.0	74.0	76.0	80.0	74.0	76.0	80.0	68	54	72	70	68	70	-	-	-	-	-	-	-	-	-	-	-	-
47	-	146.0	142.0	141.0	140.0	131.0	138.0	138.0	146	147	150	146	142	141	90.0	88.0	87.0	88.0	86.0	88.0	89.0	84.0	82.0	83.0	81.0	80.0	80.0	79.0	87	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	126.0	134.0	132.0	138.0	140.0	142.0	194.0	116	118	122	126	134	132	74.0	76.0	70.0	64.0	68.0	66.0	70.0	72.0	74.0	74.0	80.0	82.0	86.0	98.0	70	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	152.0	148.0	142.0	136.0	129.0	134.0	132.0	128	136	140	152	148	142	80.0	86.0	80.0	81.0	66.0	72.0	74.0	80.0	98.0	86.0	81.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	120.0	120.0	122.0	123.0	124.0	125.0	128.0	124	122	120	120	120	122	80.0	78.0	79.0	77.0	76.0	74.0	72.0	70.0	72.0	73.0	74.0	75.0	76.0	77.0	79	77	76	74	72	70	-	-	-	-	-	-	-	-	-	-	-	-
51	-	100.0	101.0	102.0	105.0	106.0	108.0	109.0	114	116	111	100	101	102	70.0	72.0	70.0	68.0	65.0	63.0	57.0	52.0	53.0	55.0	51.0	59.0	60.0	62.0	70	68	65	63	57	52	53	55.0	51.0	-	-	-	-	-	-	-	-	-
52	-	118.0	116.0	116.0	114.0	116.0	118.0	120.0	127	125	122	118	116	116	82.0	80.0	78.0	76.0	75.0	74.0	74.0	68.0	64.0	62.0	60.0	62.0	64.0	65.0	78	76	75	74	74	68	-	-	-	-	-	-	-	-	-	-	-	-
53	-	150.0	155.0	157.0	158.0	159.0	160.0	162.0	150	152	147	150	155	157	100.0	98.0	94.0	92.0	88.0	90.0	88.0	90.0	92.0	93.0	95.0	96.0	98.0	99.0	94	92	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	112.0	116.0	114.0	112.0	110.0	106.0	104.0	104	106	110	112	116	114	86.0	80.0	78.0	64.0	62.0	60.0	64.0	62.0	70.0	72.0	74.0	72.0	70.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	136.0	131.0	128.0	127.0	135.0	130.0	121.0	121	130	134	136	131	128	86.0	98.0	96.0	90.0	76.0	74.0	72.0	74.0	80.0	88.0	66.0	81.0	61.0	64.0	96	90	76	74	72	74	80	88.0	66.0	81.0	61.0	64.0	-	-	-	-	-	-
56	-	140.0	138.0	142.0	148.0	140.0	156.0	152.0	138	138	140	140	138	142	98.0	100.0	98.0	88.0	76.0	88.0	92.0	96.0	92.0	98.0	98.0	92.0	80.0	92.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	114.0	106.0	108.0	109.0	122.0	119.0	132.0	105	108	107	114	106	108	98.0	86.0	80.0	66.0	64.0	61.0	64.0	66.0	67.0	74.0	73.0	69.0	64.0	71.0	80	66	64	61	64	66	-	-	-	-	-	-	-	-	-	-	-	-
58	-	122.0	120.0	116.0	114.0	112.0	116.0	120.0	116	114	120	122	120	116	72.0	68.0	60.0	62.0	68.0	88.0	60.0	74.0	84.0	80.0	74.0	68.0	66.0	70.0	60	62	68	88	60	74	84	80.0	74.0	68.0	66.0	70.0	-	-	-	-	-	-
59	-	152.0	147.0	146.0	146.0	150.0	150.0	146.0	132	148	150	152	147	146	98.0	100.0	88.0	70.0	86.0	100.0	90.0	96.0	90.0	94.0	94.0	92.0	88.0	66.0	88	70	86	100	90	96	90	94.0	94.0	92.0	88.0	66.0	-	-	-	-	-	-
60	-	132.0	136.0	140.0	130.0	131.0	132.0	134.0	131	134	128	132	136	140	70.0	88.0	81.0	86.0	88.0	82.0	84.0	82.0	86.0	88.0	98.0	92.0	91.0	80.0	81	86	88	82	84	82	-	-	-	-	-	-	-	-	-	-	-	-

S.no	AFTER SHIFTING TO PACU DBP 00	PACU DBP 30	PACU DBP 60	PACU DBP 90	PACU DBP 120	PACU DBP 150	PACU DBP 180	PACU DBP 210	PACU DBP 240	PACU DBP 270	PACU DBP 300	PACU DBP 330	PACU DBP 360	MAP BASELINE	MAP 0 MIN IMMEDIATELY AFTER SPINAL	MAP 5MIN	MAP 10 MIN	MAP 15 MIN	MAP 20 MIN	MAP 25 MIN	MAP 30 MIN	MAP 35 MIN	MAP 40MIN	MAP 45MIN	MAP 50 MIN	MAP 55 MIN	MAP 60	MAP 65 MIN	MAP 70 MIN	MAP 75 MIN	MAP 80MIN	MAP 85MIN	MAP 90 MIN	MAP 95 MIN	MAP 100 MIN
1	87	86	82	87.0	86.0	82.0	87.0	86.0	82.0	87	86	82	90.0	133	101	96	89	91	94	99	99	97	97	99	103	102	98	101	98	98	97	100	100		
2	74	78	70	74.0	78.0	70.0	68.0	64.0	66.0	68	64	66	70.0	115	88	60	88	90	84	82	81	82	82	88	85	83	82								
3	100	90	86	100.0	90.0	90.0	86.0	88.0	90.0	84	88	90	78.0	142	112	108	117	104	107	101	104	103	99	99	92	88	92	101	104						
4	88	80	86	88.0	80.0	86.0	88.0	90.0	93.0	88	90	93	96.0	145	119	106	108	103	109	107	110	112	109	111	113	111	108								
5	64	66	60	64.0	66.0	60.0	54.0	62.0	68.0	54	62	68	62.0	111	94	79	79	83	77	73	78	79	77	79	78	73	75								
6	62	64	60	62.0	64.0	60.0	60.0	62.0	68.0	60	62	68	64.0	103	73	77	75	81	79	77	77	80	75	73	76	75	79	81	75	78	75	76	75		
7	68	52	54	68.0	52.0	54.0	66.0	64.0	52.0	66	64	52	62.0	120	82	83	82	70	71	81	80	74	77	78	81	84	89	87	84	72	75	84	83	75	73
8	90	97	92	100.0	97.0	92.0	90.0	94.0	90.0	90	94	90	80.0	145	120	127	125	117	113	109	114	111	104	105	101	117	122	118	117	116	112	109	111		
9	89	88	90	89.0	88.0	90.0	91.0	78.0	90.0	91	78	90	83.0	124	107	100	104	104	104	105	96	105	101	106	99	104	105	100	104	103	105	105	97	104	102
10	75	70	52	75.0	70.0	52.0	68.0	66.0	70.0	68	66	70	62.0	125	102	99	87	89	74	92	89	91	87	82	90	84	88	103	97	92	79	87	85	95	89
11	62	57	54	62.0	57.0	54.0	62.0	56.0	54.0	62	56	54	54.0	97	70	64	82	79	76	82	77	76	74	76	75	75	73	66	81	78	76	81	77	75	72
12	80	84	68	80.0	84.0	68.0	61.0	72.0	74.0	61	72	74	68.0	117	100	95	93	95	85	78	85	87	90	83	84	82	87	95	91	93					
13	76	74	60	76.0	74.0	60.0	64.0	62.0	60.0	64	62	60	68.0	118	86	95	87	85	73	78	74	75	77	76	80	79	71	89	90	82	75	78	78	74	77
14	69	63	63	69.0	63.0	63.0	61.0	64.0	61.0	61	64	61	61.0	145	96	99	85	78	76	74	79	75	75	74	73	74	74	85	78	73	74	73	75		
15	70	64	63	70.0	64.0	63.0	75.0	69.0	69.0	75	69	69	80.0	150	91	91	89	79	76	88	83	83	82	88	97	99	105								
16	61	68	54	61.0	68.0	54.0	56.0	68.0	54.0	56	68	54	74.0	101	84	75	75	79	71	71	79	71	75	79	86	84	85								
17	84	86	89	84.0	86.0	89.0	82.0	80.0	78.0	82	80	78	78.0	122	97	92	96	97	99	94	92	91	89	87	86	81	78	89	90	96	98	93	92		
18	73	67	67	73.0	67.0	67.0	68.0	67.0	64.0	68	67	64	64.0	131	94	87	85	88	91	95	96	93	100	99	93	93	96	95	98	96	97	96	99	97	105
19	58	54	56	58.0	54.0	56.0	58.0	54.0	64.0	58	54	64	56.0	96	77	77	69	69	69	73	69	75	79	80	73	73	82	80	75	69					
20	104	102	97	104.0	102.0	97.0	97.0	96.0	84.0	97	96	84	74.0	157	125	123	121	118	117	118	115	107	101	98	99	97	115								
21	61	60	60	61.0	60.0	60.0	66.0	63.0	65.0	66	63	65	65.0	98	70	69	74	73	74	79	76	77	76	78	77	78	80	76	75	74	73	77	76	77	78
22	66	68	54	66.0	68.0	54.0	60.0	72.0	74.0	60	72	74	74.0	103	81	79	78	79	73	75	85	86	81	81	83	95	92	84	82	83	73	75	82	83	82
23	100	86	68	100.0	86.0	68.0	64.0	88.0	72.0	64	88	72	86.0	123	103	90	101	95	89	87	102	93	92	97	103	107	105	99	112	101	90	85	103	93	96
24	72	74	71	72.0	74.0	71.0	64.0	88.0	84.0	64	88	84	98.0	114	96	80	86	91	88	83	103	99	97	104	109	101	99	87	92	93	91	85	104		
25	76	81	72	76.0	81.0	72.0	73.0	73.0	76.0	73	73	76	80.0	106	89	103	92	92	86	89	83	84	79	86	86	82	81	94	87	89	83	84	83		
26	52	54	60	52.0	54.0	60.0	60.0	60.0	58.0	60	60	58	72.0	112	89	83	75	77	83	81	79	77	78	82	88	92	88	82	75	75	79	77	79	79	87
27	86	86	84	86.0	86.0	84.0	88.0	78.0	86.0	88	78	86	88.0	110	103	86	100	97	99	104	95	99	99	105	100	101	101	92	99	101	97	99	92		
28	60	54	58	60.0	54.0	58.0	60.0	66.0	68.0	60	66	68	68.0	119	96	91	75	76	75	77	79	83	86	86	82	78	81								
29	80	74	70	80.0	74.0	70.0	82.0	80.0	72.0	82	80	72	74.0	137	104	105	100	95	92	102	98	94	105	104	95	91	97								
30	86	80	66	86.0	80.0	66.0	98.0	86.0	98.0	98	86	98	68.0	136	112	104	103	96	88	111	104	111	108	112	90	103	101								
31	96	100	88	96.0	100.0	88.0	76.0	84.0	88.0	76	84	88	88.0	156	125	123	119	123	109	100	106	109	108	116	109	105	105	117	114	117	109	104	112	109	104
32	66	68	66	66.0	68.0	66.0	62.0	70.0	56.0	62	70	56	50.0	118	83	72	81	82	81	78	84	71	79	69	67	71	69	75	77	83	77	78	80	71	76
33	74	68	62	74.0	68.0	62.0	52.0	54.0	60.0	52	54	60	62.0	121	103	86	89	84	79	68	73	77	77	73	79	80	86	81	87	82	79	71	71		
34	66	62	70	66.0	62.0	70.0	56.0	64.0	53.0	56	64	53	62.0	122	103	109	87	82	85	77	83	75	71	69	78	72	80	103	82	82	87	71	76	72	71
35	64	68	66	64.0	68.0	66.0	64.0	60.0	52.0	64	60	52	66.0	117	100	80	80	85	85	83	81	72	91	93	86	93	100	82	80	86					
36	58	64	68	58.0	64.0	68.0	74.0	72.0	80.0	74	72	80	70.0	103	87	77	73	76	79	85	85	91	78	75	85	87	78	84	76	79	83	85	82		
37	68	66	58	68.0	66.0	58.0	60.0	61.0	66.0	60	61	66	72.0	102	84	88	82	79	72	75	76	78	79	83	85	87	84	86	83	79	73	73	77	81	84
38	80	74	68	80.0	74.0	68.0	66.0	68.0	72.0	66	68	72	66.0	114	95	90	93	83	82	81	82	85	89	99	84	85	87	97	91	86	82	79	85		
39	70	70	76	70.0	70.0	76.0	70.0	60.0	68.0	70	60	68	84.0	121	100	97	90	89	92	87	81	85	83	93	96	95	93	91	86	87	91	87	80	85	83
40	60	84	54	60.0	84.0	54.0	52.0	58.0	54.0	52	58	54	58.0	104	79	71	77	92	71	71	77	73	74	72	76	74	74	73	79	94	73	71	75		
41	60	68	80	60.0	68.0	80.0	86.0	88.0	74.0	86	88	74	74.0	135	113	92	86	89	90	101	102	92	97	93	95	98	101	89	84	89	96	104	103		
42	76	80	88	76.0	80.0	88.0	80.0	86.0	84.0	80	86	84	90.0	138	108	103	104	106	113	106	104	103	105	94	97	101	97	92	95	100	105	98	103	100	103
43	68	60	86	68.0	60.0	86.0	90.0	98.0	80.0	90	98	80	86.0	112	97	84	87	77	99	107	109	96	98	85	97	91	94	80	86	83	100	101	107	93	99
44	68	60	60	68.0	60.0	60.0	68.0	64.0	70.0	68	64	70	64.0	140	114	84	89	76	77	86	83	87	84	87											
45	61	68	54	61.0	68.0	54.0	56.0	60.0	61.0	56	60	61	70.0	102	81	75	75	79	71	71	74	76	79	80	84	85	85	77	76	79	71	71	77		
46	54	72	70	54.0	72.0	70.0	68.0	70.0	74.0	68	70	74	74.0	132	93	86	69	83	86	83	84	83	89	90	86	91	95	87	77	90	87	84	86		
47	88	86	88	88.0	86.0	88.0	89.0	84.0	82.0	89	84	82	80.0	135	108	107	108	106	108	109	105	102	102	101	97	99	99	104	104						
48	64	68	66	64.0	68.0	66.0	70.0	72.0	74.0	70	72	74	82.0	115	96	89	83	84	83	87	90	94	93	99	101	105	130	94	93						
49	81	66	72	81.0	66.0	72.0	74.0	80.0	98.0	74	80	74	70.0	123	105	99	98	87	93	96	104	115	105	99											
50	77	76	74	77.0	76.0	74.0	72.0	70.0	72.0	72	70	72	75.0	116	94	94	93	92	90	88	87	88	89	90	91	92	94	95	94	91	89	89	88		
51	68	65	63	68.0	65.0	63.0	57.0	52.0	53.0	57	52	53	59.0	107	88	84	80	74	81	75	68	69	71	69	75	76	78	83	83	77	76	72	70	71	73
52	76	75	74	76.0	75.0	74.0	74.0	68.0	64.0	74	68	64	62.0	120	97	95	91	92	91	90	85	81	80	78	80	82	83	92	91	89	88	88	83		
53	92	88	90	92.0	88.0	90.0	88.0	90.0	92.0	88	90	92	96.0	147	119	109	99	101	103	106	110	113	114	116	117	119	120	118	116	109					
54	64	62	60	64.0	62.0	60.0	64.0	62.0	70.0	64	62	70	72.0	118	93	89	72	76	75	79	79	85	86	87	85	82	84								
55	90	76	74	90.0	76.0	74.0	72.0	74.0	80.0	72	74	80	81.0	129	115	108	105	91	93	93	95	97	101	86	99	84	83	107	106	96	93	91	92	98	102
56	88	76	88	88.0	76.0	88.0	92.0	96.0	92.0	92	96	92	92.0	140	116	111	105	97	105	108	111	107	113	115	108	105	112								
57	66	64	61	66.0	64.0	61.0	64.0	66.0	67.0	64	66	67	69.0	130	98	90	79	78	77	78	82	80	85	85	87	82	87	94	81	83	76	79	80		
58	62	68	88	62.0	68.0	88.0	60.0	74.0	84.0	60	74	84	68.0	113	87	81	75	84	97	80	90	96	92	87	83	83	87	81	79	86	99	79	87	93	92
59	70	86	100	70.0	86.0	100.0	90.0	96.0	90.0	90	96	90	92.0	145	121	106	93	101	116	110	115	109	111	111	111	109	93	109	97	106	116	109	113	110	113
60	86	88	82	86.0	88.0	82.0	84.0	82.0	86.0	84	82	86	92.0	116	104	101	101	102	99	99	99	103	105	109	105	105	98	97	101	103	100	103	98		

S.no	MAP 105 MIN	MAP 110 MIN	MAP 115MIN	MAP 120 MIN	MAP 125 MIN	MAP 130 MIN	MAP 135 MIN	MAP 140MIN	MAP 145 MIN	MAP 150 MIN	AFTER SHIFTING TO PACU MAP 00 MIN	PACU MAP 30 MIN	PACU MAP 60 MIN	PACU MAP 90 MIN	PACU MAP 120 MIN	PACU MAP 150 MIN	PACU MAP 180 MIN	PACU MAP 210	PACU MAP 240	PACU MAP 270	PACU MAP 300	PACU MAP 330	PACU MAP 360	RR Base line	RR 0	RR 5	RR 10	RR 15	RR 20	RR 25	RR 30	RR 35	RR 40	RR 45	RR 50	RR 55	RR 60	RR 65
1											100	100	97	100	100	97	99	98	95	100	99	97	102	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
2											88	90	86	89	90	84	79	81	81	82	81	82	86	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
3											112	103	100	108	100	99	97	103	107	100	104	103	95	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
4											109	103	106	107	103	107	111	110	114	107	110	112	113	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
5											79	77	75	79	81	73	72	80	82	73	78	79	77	20.0	20.0	20.0	20.0	20.0	18.0	20.0	18.0	20.0	20.0	18.0	20.0	20.0	20.0	-
6											77	78	76	75	76	75	76	80	85	77	77	80	79	18.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	18.0
7	79	83	86	87							83	74	77	86	75	73	86	78	69	81	80	74	83	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
8											112	115	111	115	112	111	110	115	112	109	114	111	103	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
9	107	99	103	103							103	103	104	104	103	104	106	97	104	105	96	105	99	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
10	82	85	87	91							95	91	77	91	95	79	86	86	86	92	89	91	83	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
11	75										81	78	76	81	77	73	80	78	76	82	77	76	76	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
12											90	93	85	90	95	85	81	87	89	78	85	87	85	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
13	73	81	84	70	89	86	86	76	75	77	84	85	76	87	84	75	76	77	73	78	74	75	81	18.0	19.0	19.0	20.0	18.0	18.0	19.0	18.0	19.0	18.0	18.0	18.0	18.0	18.0	18.0
14											82	76	75	78	74	75	73	79	75	74	79	75	74	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
15											84	80	80	87	86	88	100	82	80	88	83	83	91	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
16											75	80	70	75	82	73	75	79	71	71	79	71	83	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
17											95	96	98	94	91	95	90	93	92	94	92	91	90	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
18											102	97	95	103	99	101	96	97	96	101	98	95	93	18.0	20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
19											72	69	73	73	71	74	76	69	74	73	69	75	73	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
20											121	119	115	119	117	113	115	114	109	118	115	107	99	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
21	78	79	79	81	73	74	74	75	78	76	74	73	73	75	73	75	78	75	78	79	76	77	77	18.0	20.0	18.0	18.0	20.0	18.0	18.0	20.0	18.0	18.0	16.0	18.0	18.0	20.0	18.0
22	84	88	97	92							81	82	71	78	79	73	77	81	86	75	85	86	85	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
23	98	101	98	95							110	102	88	111	103	92	88	102	92	87	102	93	100	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.0	20.0
24											92	93	90	93	93	91	87	101	97	83	103	99	108	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
25											85	87	82	87	87	81	84	87	89	89	83	84	87	20.0	18.0	20.0	18.0	18.0	18.0	19.0	20.0	20.0	18.0	18.0	18.0	18.0	20.0	20.0
26	84										74	75	77	74	76	85	81	81	81	81	79	77	85	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
27											101	99	97	97	99	100	102	92	101	104	95	99	99	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
28											75	74	78	78	73	72	77	84	81	77	79	83	84	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
29											98	95	93	100	95	91	104	99	93	102	98	94	96	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
30											104	99	88	104	98	90	109	100	109	111	104	111	89	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
31	107	110	106	107							114	117	112	120	117	108	98	112	109	100	106	109	112	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
32	69	70	71	73							81	79	81	77	79	77	75	84	74	78	84	71	70	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
33											86	83	77	85	83	76	71	75	77	68	73	77	77	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
34	73										85	81	80	77	78	80	74	83	74	77	83	75	75	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
35											83	83	81	84	87	84	84	80	76	83	81	72	81	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
36											75	80	81	73	81	85	83	81	87	85	85	91	82	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
37	83										81	78	72	82	81	77	76	76	77	75	76	78	81	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
38											90	86	81	93	89	84	84	86	87	81	82	85	79	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
39	93										87	87	91	86	87	91	86	83	87	87	81	85	96	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
40											78	93	72	76	93	75	73	75	71	71	77	73	75	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
41											83	88	100	84	91	98	101	103	93	101	102	92	96	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
42	92	96	99	104							98	100	103	94	96	103	103	110	111	106	104	103	105	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
43	88										89	83	98	87	80	99	104	102	95	107	109	96	98	22.0	22.0	22.0	20.0	22.0	20.0	22.0	22.0	22.0	22.0	20.0	20.0	22.0	20.0	22.0
44											85	80	79	85	81	83	88	83	83	86	83	87	81	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	
45											75	81	70	77	83	73	75	74	75	71	74	76	81	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
46											73	82	85	73	85	87	90	82	89	83	84	83	88	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
47											107	105	106	105	101	105	105	105	104	109	105	102	100	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
48											85	90	88	89	92	91	111	87	89	87	90	94	99	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
49											105	93	95	99	87	93	93	96	111	96	104	99	94	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-	-	-	
50											91	91	90	92	92	91	91	88	89	88	87	88	91	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
51	70										79	77	76	80	79	78	74	73	74	75	68	69	73	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
52											90	89	88	89	89	89	89	88	84	90	85	81	80	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
53											111	110	112	114	112	113	113	110	112	108	110	113	116	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
54											80	80	78	80	78	75	77	76	82	79	79	85	86	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
55	84	97	87	88							105	94	92	102	96	93	88	90	97	93	95	97	97	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
56											105	97	106	108	97	111	112	110	107	108	111	107	109	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
57											82	78	77	80	83	80	87	79	81	78	82	80	82	22.0	20.0	20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	22.0
58	89	86	81	87							82	85	97	79	83	97	80	88	94	80	90	96	84	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
59	111	111	109	93							97	106	115	95	107	117	109	108	109	110	115	109	110	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
60											101	104	101	101	102	99	101	98	102	99	99	103	108	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

S.no	RR 70	RR 75	RR 80	RR 85	RR 90	RR 95	RR 100	RR 105	RR 110	RR 115	RR 120	RR 125	RR 130	RR 135	RR 140	RR 145	RR 150	PACU RR 00 MIN	PACURR 30 MIN	PACU RR 60	PACU RR 90	PACU RR 120 MIN	PACU RR 150 MIN	PACU RR 180 MIN	PACU RR 210 MIN	PACURR 240MIN	PACU RR 270	PACU RR 300	PACU RR 330 MIN	PACURR 360 MIN	SPO2 Base line	SPO2 00	SPO2 05	SPO2 10	SPO2 15	SPO2 20	SPO2 25	SPO2 30	SPO2 35	SPO2 40	SPO2 45	SPO2 50	SPO2 55	SPO2 60	SPO2 65	SPO2 70	SPO2 75	SPO2 80	SPO2 85	SPO2 90
1	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	99.0	100.0	100.0	99.0	99.0	100.0	99.0	99.0	99.0	99.0	100.0	99.0	99.0	99.0	99.0	98.0	98.0	99.0	99.0	100.0
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-
3	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	99.0	99.0	98.0	98.0	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0	18.0	18.0	18.0	18.0	18.0	18.0	20.0	18.0	18.0	18.0	18.0	18.0	97.0	99	99	98	99	99	98	99	99	99	99	99	99	98	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0	18.0	20.0	18.0	20.0	20.0	18.0	20.0	18.0	20.0	18.0	20.0	20.0	97.0	99.0	99.0	98.0	99.0	99.0	98.0	98.0	98.0	98.0	97.0	98.0	98.0	99.0	-	-	-	-	-	-
6	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	96.0	98.0	98.0	99.0	96.0	99.0	98.0	99.0	99.0	98.0	97.0	96.0	100.0	97.0	96.0	98.0	98.0
7	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	99.0	100.0	100.0	100.0	100.0
8	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	99.0	99.0	96.0	98.0	99.0	98.0	98.0	98.0	97.0	98.0	98.0	99.0	99.0	96.0	96.0	95.0	96.0	98.0	99.0
9	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	99.0	98.0	98.0	97.0	99.0	99.0	98.0	97.0	98.0	99.0	98.0	97.0	98.0	98.0	99.0	98.0
10	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.0	98.0	96.0	98.0	98.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0
11	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	99.0	99.0	100.0	100.0	100.0
12	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	98.0	98.0	98.0	-	-	-
13	19.0	19.0	20.0	18.0	18.0	19.0	18.0	19.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	19.0	18.0	19.0	18.0	18.0	18.0	18.0	19.0	18.0	19.0	18.0	98.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	100.0	99.0	99.0	99.0	100.0	100.0	98.0	99.0	98.0	98.0	99.0	99.0
14	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.0	98.0	96.0	99.0	99.0	99.0
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	96.0	96.0	96.0	96.0	96.0	95.0	97.0	96.0	98.0	97.0	100.0	100.0	99.0	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-
17	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
18	20.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	97.0	98.0	98.0	94.0	96.0	98.0	98.0	100.0	98.0	96.0	98.0	99.0	100.0	98.0	97.0	97.0	97.0	97.0	97.0	98.0
19	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	94.0	94.0	94.0	95.0	94.0	96.0	96.0	95.0	95.0	98.0	96.0	98.0	96.0	96.0	95.0	96.0	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	95.0	95.0	96.0	95.0	95.0	95.0	98.0	99.0	96.0	97.0	98.0	100.0	98.0	-	-	-	-	-	-
21	20.0	18.0	18.0	20.0	18.0	18.0	20.0	18.0	18.0	16.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	20.0	18.0	18.0	20.0	18.0	18.0	16.0	20.0	18.0	18.0	20.0	18.0	18.0	97.0	98	98	97	98	98	97	97	98	97	98	98	98	98	97.0	98.0	100	97	98	98
22	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	100.0	100.0	100.0	100.0	96.0	96.0	100.0	99.0	96.0	98.0	99.0	99.0
23	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	98.0	99.0	100.0	100.0	100.0	100.0
24	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	99.0	99.0	98.0	98.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.0	96.0	98.0	98.0	98.0	99.0
25	18.0	20.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	19.0	20.0	20.0	18.0	18.0	18.0	18.0	19.0	20.0	20.0	18.0	96.0	98.0	98.0	97.0	98.0	98.0	97.0	98.0	97.0	96.0	95.0	96.0	96.0	96.0	97.0	98.0	98.0	98.0	98.0	98.0
26	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	97.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	98.0	98.0	98.0	98.0	98.0
27	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	99.0	100.0	100.0	100.0	100.0	100.0
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	97.0	97.0	98.0	99.0	97.0	97.0	97.0	98.0	96.0	96.0	98.0	98.0	98.0	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	98.0	98.0	98.0	97.0	98.0	99.0	98.0	97.0	97.0	98.0	97.0	98.0	97.0	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	99.0	99.0	100.0	100.0	98	-	-	-	-	-	-
31	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	96.0	96.0	96.0	98.0	96.0	98.0	98.0	96.0	98.0	98.0	99.0	98.0	98.0	96.0	98.0	96.0	96.0	98.0	96.0
32	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	97.0	97.0	98.0	97.0	97.0	96.0	96.0	97.0	97.0	97.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	97.0
33	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	98.0	98.0	99.0	98.0	99.0	100.0	100.0	99.0	100.0	99.0	100.0	98.0	98.0	99.0	98.0	98.0	99.0
34	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	97.0	97.0	98.0	96.0	97.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
35	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	99.0	98.0	98.0	99.0	98.0	98.0	99.0	100.0	100.0	100.0	100.0	98.0	98.0	98.0	-	-	-
36	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	98.0	98.0	98.0	99.0	98.0	98.0	98.0	99.0	99.0	98.0	98.0	98.0	98.0	98.0	99.0	98.0	99.0	98.0	99.0
37	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	98.0	98.0	98.0	99.0	98.0	98.0	98.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	99.0	99.0	98.0	99.0	98.0
38	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	99.0	99.0	98.0	98.0	99.0	98.0	98.0	99.0	98.0	99.0	98	98	98.0	99.0	98.0	98.0	98.0	98.0	99.0
39	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	99.0	97.0	98.0	97.0	98.0	98.0	97.0	97.0	98.0	99.0	98.0	98.0	98.0	99.0	98.0	99.0	98.0
40	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	96.0	96.0	99.0	100.0	100.0	98.0	99.0	96.0	98.0	96.0	98.0
41	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	97.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	98.0	98.0	98.0	96.0	98.0
42	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
43	22.0	22.0	20.0	22.0	20.0	22.0	22.0	22.0	-	-	-	-	-	-	-	-	-	22.0	20.0	22.0	22.0	22.0	22.0	20.0	22.0	20.0	22.0	22.0	22.0	22.0	98	96	96	97	98	96	98	98	98	97	96	99	98	97	98	98.0	98.0	98	98.0	98.0	98
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	96.0	96.0	96.0	97.0	96.0	97.0	97.0	97.0	98.0	98.0	-	-	-	-	-	-	-	-	-
45	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	99.0	99.0	98.0	98.0	99.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	99.0	98.0	98.0	99.0
46	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	99.0	99.0	99.0	100.0
47	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	-	-	-	-
48	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	-
50	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
51	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
52	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
53	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-
55	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-
57	20.0	20.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99	100	100	100	100	100	100	100	100	100	100	100	100	100	99	98	96	100	100	100	100
58	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	100.0	100.0	99.0	98.0	99.0	99.0	99.0	98.0	99.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	99.0
59	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	97.0	98.0	98.0	98.0	99.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	98.0	98.0	98.0	98.0	98.0
60	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	99.0	99.0	98.0	99.0	99.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	98.0	98.0	99.0	99.0	99.0

S.no	SPO2 95	SPO2 100	SPO2 105	SPO2 110	SPO2 115	SPO2 120	SPO2 125	SPO2 130	SPO2 135	SPO2 140	SPO2 145	SPO2 150	AFTER SHIFTING TO PACU SPO2 00	PACU SPO2 30	PACU SPO2 60	PACU SPO2 90	PACU SPO2 120	PACU SPO2 150	PACU SPO2 180	PACU SPO2 210	PACU SPO2 240	PACU SPO2 270	PACU SPO2 300	PACU SPO2 330	PACU SPO2 360	TEMPERATURE FOREHEAD Base line	TEMPERATURE forehead 0 MIN	TemP forehead 30 MIN	TemP forehead 60 MIN	TemP forehead 90 MIN	TemP forehead 120 MIN	TemP forehead 150 MIN	TemP forehead 180 MIN	TemP forehead 210	TemP forehead 240	TemP forehead 270	TemP forehead 300
1	-	-	-	-	-	-	-	-	-	-	-	-	99.0	100.0	99.0	99.0	99.0	99.0	100.0	100.0	99.0	99.0	99.0	99.0	100.0	94.6	98.4	97.3	98.1	97.2	96.4	97.3	98.4	97.7	97.9	98.3	98.1
2	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.4	97.6	97.9	98.0	97.7	97.5	97.4	97.4	96.9	96.8	97.0	97.2
3	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.7	96.6	96.0	95.2	95.0	96.8	97.2	97.4	96.8	97.1	96.9	95.9
4	-	-	-	-	-	-	-	-	-	-	-	-	99	99	98	99	99	99	99	99	98	99	99	99	99	98.9	99.6	98.6	98.7	98.0	97.6	97.2	98.0	97.6	96.8	96.8	96.4
5	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	98.0	98.0	98.0	98.0	97.0	99.0	98.0	98.0	98.0	98.0	97.0	97.9	97.6	97.2	97.0	97.4	96.8	96.5	96.6	96.8	97.0	97.5	97.3
6	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	99.0	96.0	99.0	98.0	99.0	98.0	99.0	96.0	99.0	98.0	99.0	96.5	95.6	97.6	97.9	97.6	97.8	95.9	95.0	96.6	96.8	96.9	96.9
7	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.4	97.6	95.9	97.0	97.8	98.0	97.8	97.9	96.8	96.4	96.0	96.6
8	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	98.0	98.0	98.0	97.0	98.0	99.0	98.0	98.0	98.0	97.0	98.0	97.6	97.5	97.5	97.0	96.8	96.9	97.1	96.5	96.6	96.9	96.4	95.9
9	98.0	97.0	99.0	99.0	98.0	97.0	-	-	-	-	-	-	99.0	98.0	98.0	97.0	99.0	99.0	98.0	98.0	98.0	97.0	99.0	99.0	98.0	98.4	98.1	99.1	98.4	98.1	98.3	97.9	97.4	97.5	97.4	96.8	96.9
10	99.0	99.0	98.0	98.0	96.0	98.0	-	-	-	-	-	-	99.0	99.0	99.0	99.0	98.0	98.0	96.0	99.0	99.0	99.0	98.0	98.0	96.0	97.2	97.1	96.8	96.9	97.2	97.0	97.2	96.9	96.9	96.7	97.0	97.1
11	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	97.1	97.0	97.4	97.1	96.8	96.6	96.8	96.9	97.0	97.2	97.1
12	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	99.0	99.0	99.0	98.0	98.0	98.0	99.0	99.0	99.0	97.6	97.5	97.4	97.5	96.9	96.8	96.5	96.4	96.5	96.6	96.4	96.6
13	99.0	99.0	100.0	99.0	99.0	99.0	98.0	98.0	98.0	99.0	98.0	98.0	99.0	99.0	99.0	99.0	100.0	99.0	99.0	99.0	99.0	99.0	100.0	99.0	99.0	98.6	97.5	97.8	96.9	96.8	97.4	97.1	96.3	96.7	96.8	96.6	96.2
14	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.1	97.8	97.6	97.8	97.4	97.1	96.9	96.7	96.2	96.4	96.6	96.9
15	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	95.0	97.0	96.0	98.0	97.0	96.0	95.0	97.0	96.0	98.0	97.0	98.2	98.1	98.0	97.9	97.4	98.0	97.5	97.0	97.1	96.9	96.8	96.9
16	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.2	97.0	96.9	96.8	97.1	97.1	97.0	96.9	96.8	96.7	96.0	95.4
17	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.2	98.0	97.4	96.8	94.3	93.0	93.4	94.6	94.8	94.9	95.0	95.0
18	98.0	100.0	-	-	-	-	-	-	-	-	-	-	96.0	98.0	98.0	100.0	98.0	96.0	98.0	98.0	98.0	100.0	98.0	96.0	98.0	98.6	98.5	98.4	97.3	96.8	97.1	97.0	97.3	97.2	97.0	97.1	97.4
19	-	-	-	-	-	-	-	-	-	-	-	-	95.0	94.0	96.0	96.0	95.0	95.0	98.0	94.0	96.0	96.0	95.0	95.0	98.0	96.9	96.1	96.0	95.8	95.0	96.4	96.9	97.0	96.9	96.8	96.6	96.8
20	-	-	-	-	-	-	-	-	-	-	-	-	95.0	95.0	95.0	98.0	99.0	96.0	97.0	95.0	95.0	98.0	99.0	96.0	97.0	95.6	95.8	95.9	96.8	96.9	96.8	96.6	96.6	96.8	96.6	96.5	96.6
21	97	97	98	97	98	98	98	98	97.0	98.0	100	97	98	98	97	97	98	97	98	98	97	97	98	97	98	97.7	97.8	97.1	97.0	97.1	96.8	96.5	96.6	96.5	96.6	96.7	96.3
22	99.0	99.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	99.0	99.0	99.0	99.0	100.0	100.0	100.0	99.0	99.0	99.0	100.0	100.0	100.0	97.9	97.8	97.5	97.5	97.4	97.6	97.4	97.0	96.9	96.4	96.6	96.4
23	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	97.1	97.0	96.8	96.5	96.8	96.9	96.6	96.6	96.5	96.8	97.1
24	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	97.4	97.3	97.1	96.9	96.8	97.3	97.2	96.6	96.4	96.8	96.8	96.6
25	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	97.0	98.0	97.0	96.0	95.0	98.0	97.0	98.0	97.0	96.0	95.0	98.2	98.4	98.1	98.0	97.1	96.8	96.8	96.4	96.6	97.7	97.9	98.0
26	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.6	97.6	97.5	97.1	97.4	97.8	96.9	96.8	97.4	97.4	97.3	96.8
27	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.4	97.8	97.5	96.8	96.9	97.0	97.4	97.1	96.9	96.5	96.5	96.4
28	-	-	-	-	-	-	-	-	-	-	-	-	99.0	97.0	97.0	97.0	98.0	96.0	96.0	97.0	97.0	97.0	98.0	96.0	96.0	97.8	97.7	98.1	97.8	97.5	97.1	96.9	96.8	96.7	96.5	96.6	96.9
29	-	-	-	-	-	-	-	-	-	-	-	-	97.0	98.0	99.0	98.0	97.0	97.0	98.0	98.0	99.0	98.0	97.0	97.0	98.0	97.4	98.6	98.5	97.9	98.4	98.1	98.0	98.6	97.3	97.2	97.1	96.4
30	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	99.0	99.0	98.0	98.0	98.0	98.0	99.0	99.0	96.9	97.4	97.8	97.1	96.8	96.6	96.8	96.4	96.6	97.4	96.4	96.9
31	98.0	98.0	96.0	98.0	98.0	99.0	-	-	-	-	-	-	98.0	96.0	98.0	98.0	96.0	98.0	98.0	96.0	98.0	98.0	96.0	98.0	98.0	97.4	97.2	97.4	97.1	97.0	97.2	96.9	96.9	96.2	97.1	97.0	96.8
32	98.0	98.0	98.0	97.0	97.0	98.0	-	-	-	-	-	-	97.0	97.0	96.0	96.0	97.0	97.0	97.0	97.0	96.0	96.0	97.0	97.0	97.0	96.5	98.6	97.6	97.6	97.8	97.7	97.8	97.5	97.8	97.5	96.8	97.4
33	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	98.0	99.0	100.0	100.0	99.0	99.0	98.0	99.0	100.0	100.0	99.0	97.4	97.8	96.9	97.5	97.8	96.8	97.0	97.2	96.9	96.5	96.5	96.3
34	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	96.0	97.0	98.0	98.0	96.0	98.0	98.0	97.0	98.0	98.0	96.0	98.0	98.0	96.5	97.8	97.4	97.9	97.1	96.9	96.8	96.9	96.5	96.4	96.2	95.9
35	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	99.0	98.0	98.0	99.0	100.0	98.0	99.0	98.0	98.0	99.0	100.0	98.1	98.4	97.9	97.4	98.1	97.5	97.0	97.1	96.9	96.8	97.1	97.0
36	-	-	-	-	-	-	-	-	-	-	-	-	99.0	98.0	98.0	98.0	98.0	99.0	99.0	98.0	98.0	98.0	98.0	99.0	99.0	97.4	97.3	97.1	97.0	97.1	96.9	96.8	96.5	96.2	96.1	95.4	95.6
37	98.0	98.0	99.0	-	-	-	-	-	-	-	-	-	99.0	98.0	98.0	98.0	99.0	100.0	100.0	98.0	98.0	98.0	99.0	100.0	100.0	98.0	97.5	97.6	97.2	97.1	96.8	96.5	96.4	96.4	96.2	96.8	96.6
38	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	98.0	98.0	99.0	98.0	99.0	99.0	98.0	98.0	99.0	98.0	99.0	96.9	96.8	97.1	97.0	96.9	96.8	96.6	96.4	95.4	96.4	96.6	96.8
39	97.0	98.0	98.0	-	-	-	-	-	-	-	-	-	97.0	98.0	97.0	98.0	98.0	97.0	97.0	98.0	97.0	98.0	98.0	97.0	97.0	98.6	98.4	98.1	97.9	97.8	97.7	97.9	97.8	97.7	97.3	98.4	97.4
40	-	-	-	-	-	-	-	-	-	-	-	-	96.0	98.0	98.0	98.0	98.0	96.0	96.0	98.0	98.0	98.0	98.0	96.0	96.0	97.4	96.9	97.0	97.3	97.0	97.1	96.9	96.8	96.3	96.8	96.6	96.1
41	-	-	-	-	-	-	-	-	-	-	-	-	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.9	96.8	96.9	96.7	96.6	96.7	96.5	96.5	97.1	97.0	96.9	96.8
42	98.0	98.0	98.0	98.0	98	98	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.3	97.2	97.4	97.1	97.0	96.9	97.1	97.4	97.0	97.2	97.4	97.5
43	98	98	98	-	-	-	-	-	-	-	-	-	98	96	98	98	98	97	96	96	98	98	98	97	96	97.0	98.1	98.2	97.2	97.8	97.6	98.2	96.9	96.8	97.0	98.6	97.9
44	-	-	-	-	-	-	-	-	-	-	-	-	97.0	96.0	97.0	97.0	97.0	98.0	98.0	96.0	97.0	97.0	97.0	98.0	98.0	97.8	97.6	97.8	97.5	96.9	97.4	97.5	96.8	96.9	96.0	96.2	97.8
45	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	100.0	97.2	97.0	96.9	97.1	97.1	97.0	96.9	96.8	96.1	96.6	96.0	95.4
46	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	97.0	97.0	97.0	97.8	97.7	96.9	96.5	96.1	96.4	96.6	96.8
47	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.5	97.2	97.3	97.6	97.2	97.2	97.0	96.9	96.8	96.7	96.6	96.6
48	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.8	96.9	97.0	97.0	97.1	96.8	96.5	95.6	95.4	96.6	95.2	95.2
49	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.1	97.4	97.2	96.9	96.9	96.7	97.0	97.1	96.8	96.9	96.5	96.7
50	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.6	97.5	97.4	97.5	96.9	96.8	96.5	96.4	96.4	96.0	96.4	96.6
51	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.8	96.9	96.9	97.0	97.0	97.1	90.8	96.5	95.6	95.4	96.6	95.2
52	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.6	97.5	97.4	97.5	96.9	96.8	96.5	96.4	96.5	96.4	96.6	96.6
53	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.8	96.7	96.6	96.4	96.0	95.8	96.0	96.2	96.5	96.6	95.3	95.2
54	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.9	96.5	96.8	96.5	96.6	96.5	96.6	96.5	96.1	95.8	95.7	96.0
55	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.9	97.8	97.8	97.5	97.5	97.6	96.9	96.9	97.4	97.2	96.8	97.0
56	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.5	97.0	97.4	97.1	96.9	96.4	96.8	97.1	96.6	96.4	95.9	95.9
57	-	-	-	-	-	-	-	-	-	-	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	97.5	96.5	96.9	96.6	96.1	96.2	96.0	96.1	96.2	96.0	96.1	96.2
58	98.0	99.0	99.0	99.0	99.0	98.0	-	-	-	-	-	-	100.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.7	97.8	97.7	97.0	97.1	96.8	96.5	97.8	96.1	97.3	96.8	96.6
59	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	99.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.9	98.8	98.6	97.6	96.9	96.8	96.4	96.6	96.8	96.1	96.9	97.4
60	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	100.0	97.1	96.8	96.9	97.0	96.4	96.4	96.0	96.1	95.4	95.2	95.9	96.0

S.no	TemP forehead 330	TemP forehead 360	Temp tympanic memb Base line	Temp tympanic memb 0	Temp tympanic memb 30	Temp tympanic memb 60	Temp tympanic memb 90	Temp tympanic memb 120	Temp tympanic memb 150	Temp tympanic memb 180	Temp tympanic memb 210	Temp tympanic memb 240	Temp tympanic memb 270	Temp tympanic memb 300	Temp tympanic memb 330	Temp tympanic memb 360	Rescue drug Tramadol	Onset of shivering	Cessation of shivering	Bradycardia	Hypotension	Nausea vomiting	Dizziness/ sedation	Shivering	Grading of shivering as per Wrench Grade 0	Wrench Grade 1	Wrench Grade 2	Wrench Grade 3	Wrench Grade 4	MOSS/A SCORE 6	MOSS/A SCORE 5	MOSS/A SCORE 4	MOSS/A GRADE 3	MOSS/A GRADE 2	MOSS/A GRADE 1	MOSS/A SCORE 0
1	98.6	97.8	96.2	95.8	94.9	96.0	96.4	96.9	96.7	97.2	96.9	96.8	97.0	96.9	97.8	96.6	50.0	20.0	15.0	-	P	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
2	97.1	97.0	98.6	98.5	98.6	98.4	98.3	98.5	98.6	98.4	98.0	97.8	96.6	98.0	98.0	97.8	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
3	96.0	96.4	98.1	98.0	96.5	97.6	97.1	97.4	97.8	97.6	97.1	96.6	96.1	95.9	96.1	96.2	-	40.0	5.0	-	-	-	-	P	-	P	-	-	-	-	P	-	-	-	-	-
4	97.0	96.9	97.8	97.4	97.0	96.4	96.0	96.2	96.4	96.5	96.8	97.0	97.1	96.8	97.2	97.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
5	96.8	96.4	97.5	98.0	97.9	97.8	97.4	97.2	96.9	96.0	96.2	97.3	97.0	96.9	96.3	96.0	50.0	15.0	7.0	-	P	-	-	P	-	-	-	-	P	-	P	-	-	-	-	-
6	94.8	95.6	99.6	98.6	98.0	97.8	98.2	98.5	97.5	97.5	96.6	97.5	97.3	97.8	96.0	96.4	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
7	96.5	96.8	98.7	97.8	95.9	96.7	97.8	98.6	98.5	98.8	98.9	98.9	98.4	99.0	98.5	98.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
8	95.8	96.8	98.9	98.0	97.5	97.4	97.0	97.2	97.9	98.0	98.4	98.6	98.8	98.6	98.4	98.6	50.0	40.0	10.0	-	-	-	-	P	-	-	-	-	P	-	P	-	-	-	-	-
9	97.1	97.0	98.9	98.8	97.8	97.5	97.6	97.6	97.4	97.9	97.5	97.9	97.7	97.6	97.9	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
10	96.8	96.9	98.0	98.3	98.0	98.1	98.2	98.3	98.4	98.1	97.9	97.7	97.4	97.2	97.7	97.9	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
11	96.8	97.0	97.5	97.6	97.9	97.1	96.9	97.4	96.9	96.8	96.8	96.9	97.1	97.9	97.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
12	96.6	96.8	98.5	98.1	97.9	97.9	97.8	97.4	97.2	97.0	97.0	96.8	96.4	96.1	96.5	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
13	95.9	95.4	98.0	96.8	98.7	97.8	97.7	97.7	97.3	97.4	97.4	97.0	97.1	94.6	94.9	95.1	50.0	30.0	8.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
14	96.8	97.2	96.8	96.4	96.2	96.0	96.9	97.1	96.4	95.3	95.1	95.8	96.2	96.2	96.6	97.0	50.0	30.0	3.0	-	-	P	-	P	-	-	-	P	-	-	P	-	-	-	-	-
15	97.1	97.0	99.0	98.5	98.1	97.9	98.1	98.0	97.8	97.6	97.4	97.1	97.4	97.9	97.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
16	96.0	96.1	98.0	98.1	97.9	98.0	98.0	97.8	97.9	97.1	97.8	96.2	96.1	96.0	96.4	97.0	50.0	10.0	5.0	-	-	-	-	P	-	-	-	P	-	-	-	P	-	-	-	-
17	95.1	95.3	98.0	97.4	97.0	96.4	94.1	92.8	92.6	92.7	92.9	93.0	93.0	93.2	93.4	93.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
18	97.0	97.3	97.6	97.9	98.1	96.8	98.6	99.4	98.9	96.8	98.0	98.0	97.4	97.9	97.8	97.9	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
19	97.0	97.2	97.4	97.4	97.1	96.0	96.2	96.4	96.1	97.2	97.4	97.8	97.6	95.8	95.2	95.6	50.0	40.0	10.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
20	96.7	96.4	96.1	95.7	95.5	93.8	94.9	95.0	95.2	95.0	95.5	94.9	94.6	95.1	94.2	91.9	-	25.0	5.0	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
21	96.5	96.4	97.5	98.0	97.9	97.5	97.8	95.9	95.0	95.1	95.6	95.5	95.1	95.8	95.2	95.6	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
22	96.5	96.6	98.5	98.5	98.1	97.9	97.9	97.4	97.0	97.2	97.4	97.8	97.6	95.4	95.8	95.9	-	40.0	10.0	-	-	-	-	P	-	P	-	-	-	-	P	-	-	-	-	-
23	97.2	97.6	99.6	99.4	98.9	98.0	97.1	97.1	97.0	96.9	96.8	97.0	97.2	97.1	97.4	97.8	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
24	96.9	96.4	98.1	98.0	97.9	96.8	97.4	97.8	97.9	97.2	97.1	96.8	96.9	97.2	97.1	96.8	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
25	98.1	98.3	98.5	97.9	97.4	97.0	96.8	96.0	96.7	97.4	97.4	97.0	97.1	97.4	97.6	97.8	50.0	20.0	10.0	-	-	-	-	P	-	-	-	-	P	-	P	-	-	-	-	-
26	97.0	97.1	98.8	98.6	98.4	98.4	98.0	97.8	97.7	97.5	97.8	97.7	97.8	98.1	97.9	97.8	50.0	25.0	8.0	-	-	-	-	P	-	-	-	P	-	-	-	P	-	-	-	-
27	96.6	97.0	98.9	98.6	98.4	98.2	97.8	98.1	98.1	98.0	97.8	97.6	97.4	97.3	97.2	97.8	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
28	97.0	97.8	99.0	99.1	98.9	98.7	98.4	97.9	97.4	97.4	97.4	97.4	97.4	96.6	97.2	97.1	50.0	10.0	6.0	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
29	96.3	96.2	96.6	95.8	96.8	98.1	97.9	97.8	98.2	98.0	97.9	97.3	96.8	96.3	96.0	95.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
30	97.1	97.3	97.4	97.8	97.9	97.4	97.6	97.1	96.9	96.8	96.9	97.4	97.2	97.8	97.9	98.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
31	96.9	96.8	98.1	98.6	98.2	98.0	97.9	97.8	97.9	97.4	97.8	98.0	98.4	97.9	97.6	97.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
32	96.6	97.1	98.7	98.4	98.4	99.2	98.2	98.3	98.4	98.1	97.0	97.8	97.2	97.4	98.1	97.9	-	10.0	2.0	-	P	-	-	P	-	-	P	-	-	-	P	-	-	-	-	-
33	96.3	96.2	98.1	98.4	98.0	98.1	97.9	97.8	97.6	97.6	97.5	97.7	97.5	96.1	95.9	95.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
34	96.4	96.6	98.3	98.2	98.1	97.9	97.8	97.4	97.1	97.0	96.6	95.4	95.3	95.9	96.1	96.6	50.0	40.0	5.0	-	-	-	P	-	-	-	-	P	-	-	P	-	-	-	-	-
35	96.8	96.6	99.0	98.5	98.1	97.9	98.1	98.0	97.8	97.7	97.4	97.1	97.4	97.9	97.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
36	95.8	96.2	98.1	98.0	98.0	97.9	97.9	97.8	97.8	97.2	97.4	97.8	97.6	95.1	95.2	95.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
37	96.4	96.2	98.6	98.5	98.6	98.4	98.0	97.6	97.4	97.0	96.6	96.9	96.6	96.4	96.2	97.0	50.0	30.0	10.0	-	-	-	-	P	-	-	P	-	-	-	-	P	-	-	-	-	-
38	96.6	97.0	98.4	98.0	97.0	97.1	97.2	97.6	97.2	97.0	96.8	96.1	97.2	97.4	97.8	98.0	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
39	97.0	97.4	98.9	98.4	99.0	98.7	98.1	97.9	97.8	97.8	97.7	97.8	97.8	98.0	98.1	97.9	50.0	15.0	5.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
40	95.9	96.0	97.4	97.6	96.9	97.0	97.1	97.0	96.9	97.2	97.4	97.8	97.6	96.3	96.4	97.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
41	96.8	96.9	97.8	97.6	97.9	97.6	98.1	97.6	97.7	97.9	97.8	97.9	97.7	97.6	97.7	97.7	-	15.0	5.0	-	P	P	-	P	-	P	-	-	-	-	P	-	-	-	-	-
42	97.6	97.8	98.0	97.9	97.9	97.8	97.6	98.0	98.2	98.1	98.3	98.1	98.2	98.4	98.2	98.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
43	98.8	97.5	97.5	97.6	97.9	97.5	96.9	97.2	98.1	96.2	96.1	97.2	98.0	97.5	97.2	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
44	97.5	96.9	96.6	96.4	97.0	96.2	96.0	96.0	95.6	95.2	94.8	94.2	94.0	96.6	96.1	95.8	50.0	30.0	4.0	-	P	-	-	P	-	-	-	P	-	-	-	P	-	-	-	-
45	96.0	96.8	98.0	97.8	97.9	98.0	98.0	97.8	97.9	97.8	98.0	97.9	97.9	96.0	96.4	97.0	50.0	15.0	7.0	-	-	-	-	P	-	-	-	-	P	-	P	-	-	-	-	-
46	97.6	97.5	95.8	95.6	95.8	95.7	95.7	95.3	95.3	95.0	94.9	95.1	94.8	95.5	96.6	96.9	-	30.0	4.0	-	-	-	-	P	-	P	-	-	-	-	P	-	-	-	-	-
47	97.0	97.1	98.1	98.0	97.9	97.8	97.7	97.7	97.6	97.8	98.1	98.2	98.2	97.9	97.7	97.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
48	95.4	95.1	97.9	97.8	98.2	98.1	97.4	97.8	97.6	97.1	96.2	96.2	96.3	96.1	96.0	96.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
49	97.0	97.2	98.0	98.3	98.0	97.9	97.8	96.4	96.9	97.1	97.4	97.6	97.1	97.6	97.4	97.6	50.0	25.0	5.0	-	-	-	-	P	-	-	-	-	P	-	-	P	-	-	-	-	-
50	96.5	96.6	98.5	98.1	98.0	98.3	97.9	97.8	97.7	97.5	97.4	97.3	97.5	97.6	97.7	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
51	95.4	95.1	97.9	97.8	98.2	98.1	97.9	97.8	97.6	97.5	97.8	97.5	97.2	96.8	96.0	96.0	-	15.0	5.0	-	P	P	-	P	-	-	P	-	-	-	P	-	-	-	-	-
52	96.8	96.9	98.5	98.1	97.9	97.9	97.8	97.9	97.2	97.0	96.8	96.4	96.1	96.5	96.9	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
53	95.4	95.1	97.9	97.8	98.2	98.1	97.4	97.8	97.6	97.6	97.1	96.2	96.1	96.3	96.0	96.2	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
54	96.2	96.2	97.8	97.7	97.7	97.4	97.2	96.8	97.0	96.9	96.2	96.4	95.1	96.6	96.8	96.9	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
55	97.0	96.7	98.5	98.6	98.1	97.8	97.7	96.8	97.9	97.7	97.1	96.8	96.4	97.8	97.7	97.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
56	96.9	96.4	99.2	97.9	98.1	97.9	97.4	97.6	97.2	97.9	97.4	97.8	97.1	96.4	97.2	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
57	96.4	96.9	100.4	99.9	100.2	99.7	99.8	100.1	99.9	99.5	99.8	99.4	99.5	99.1	99.3	99.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
58	95.4	95.3	97.5	98.0	97.9	97.5	97.8	95.9	95.0	95.9	96.6	96.9	97.8	97.0	96.8	96.8	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
59	97.2	97.0	97.8	97.7	97.1	96.4	97.4	96.6	95.2	95.5	95.0	94.9	95.1	96.6	96.2	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
60	96.2	96.1	97.9	97.5	97.6	97.6	97.4	97.0	96.9	95.9	95.2	96.0	96.2	96.9	97.0	97.0	50.0	30.0	5.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-

S.no	Name	MRD	Age	Sex	HEIGHT (Cms)	WEIGHT	BMI	diagnosis	proposed surgery	ASA	GROUP	anesthesia start : date / time	highest dermatomal level	duration of surgery (minutes)	Duration of Spinal Anaesthesia (minutes)	Operating room temperature (·C)	HR (Base line)	HR 0	HR 5	HR 10	HR 15	HR 20	HR 25	HR 30	HR 35	HR 40	HR 45	HR 50	HR 55	HR 60	HR 65	HR 70	HR 75	HR 80	HR 85	HR 90	HR 95	HR 100	HR 105	HR 110	HR 115	HR 120	HR 125	HR 130
61	RS	1171811	26	M	166	65	23.6	fracture both bone LEFT LEG	RIGHT BIMALLEOLAR FIXATION	1	C	16-09-2021 12:00	T8	120	200	22	68.0	70.0	72	68	66	68	64	68	62	66	62	70	72	68	70	68	68	72	68	70	62	66	62	70	72	68	-	-
62	NS	1174500	37	M	162	90	34.3	FRACTURE PROXIMAL TIBIA	ORIF TIBIA	1	A	18-09-2021 13:45	T8	120	180	22	80.0	74.0	71	67	56	52	54	52	59	52	51	50	49	50	52	50	50	49	110	90	80	77	74	74	72	70	-	-
63	BS	1172600	50	M	170	102	35.3	ACL AVULSION INJURY LEFT SIDE	ACL REPAIR	2	B	18-09-2021 09:15	T6	75	180	21	80.0	75.0	76	74	70	68	70	72	74	70	68	66	68	70	68	68	-	-	-	-	-	-	-	-	-	-	-	-	-
64	BB	1175146	49	M	157	80	32.5	ACL TEAR RIGHT SIDE	ACL REPAIR	2	A	18-09-2021	T6	120	180	22	86.0	88.0	85	79	82	80	75	70	74	72	64	70	69	70	68	70	70	69	70	68	74	72	64	70	69	70	-	-
65	MK	1171677	28	M	159	75	29.7	ACL Tear	acl repair	1	B	21-09-2021 09:15	T6	120	170	21	97.0	99.0	99	100	95	96	90	87	89	88	96	90	92	88	93	88	88	92	87	93	89	88	96	90	92	88	-	-
66	RJ	1164849	57	M	161	65	25.1	tibia fracture	ORIF	2	A	21-09-2021	T8	120	190	22	70.0	69.0	65	75	86	78	80	68	67	68	69	67	72	73	67	73	73	72	68	67	67	68	69	67	72	73	-	-
67	IS	1178828	27	M	168	80	28.3	POCO AMPUTATION	STUMP CLOSURE	2	C	21-09-2021 12:00	T8	120	170	21	110.0	99.0	98	88	86	80	72	74	70	74	78	80	82	80	82	80	80	82	74	82	70	74	78	80	82	80	-	-
68	PG	558635	31	M	162	75	28.6	FUCO TIBIA IMPLANT	IMPLANT REMOVAL	1	A	23-09-2021	T6	60	160	22	92.0	95.0	94	92	90	94	90	96	92	90	90	92	90	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	PM	1180439	47	F	169	70	24.5	LEFT POTTS FRACTURE	ORIF ANKLE	1	C	27-09-2021 12:00	T8	120	180	21	106.0	110.0	112	109	105	106	108	98	96	92	90	85	84	85	84	85	85	84	98	84	96	92	90	85	84	85	-	-
70	MM	51586	31	M	170	68	23.5	ACHILLES TENDON TEAR	TENDON REPAIR	1	A	26-09-2021	T10	90	190	22	96.0	110.0	98	94	96	92	99	96	94	92	96	92	94	90	92	90	90	94	96	92	-	-	-	-	-	-	-	-
71	MG	57914	21	M	164	90	33.5	ACL TEAR LEFT	ACL RECONSTRUCTION	2	C	28/09/21 11:00AM	T8	120	180	22	78.0	90.0	82	86	88	80	78	78	80	82	84	86	84	82	80	82	82	84	78	80	80	82	84	86	84	82	-	-
72	GS	1171851	60	F	156	65	26.7	CELLULITIS RIGHT LEG	Incision & drainage	3	A	29-09-2021	T8	60	180	21	106.0	110.0	108	106	100	102	98	98	100	102	96	100	102	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	JS	1181101	28	M	169	95	33.3	tibia fracture	exfix applicatiion	1	B	29-09-2021 14:00	T8	75	180	21	84.0	99.0	90	92	96	98	96	94	90	88	86	84	88	88	86	88	88	-	-	-	-	-	-	-	-	-	-	-	-	-
74	RS	1179304	35	M	160	62	24.2	ACL TEAR RIGHT KNEE	RT ACL REPAIR	1	C	30-09-2021 11:45	T10	120	190	22	116.0	115.0	116	110	106	102	106	98	104	100	102	96	98	96	102	96	96	98	98	102	104	100	102	96	98	96	-	-
75	LS	1182140	40	M	165	92	33.8	FEMUR FRACTURE	FEMUR PLATING	2	C	30/09/21 09:30AM	T8	150	180	21	94.0	99.0	95	94	98	96	92	100	102	100	98	96	94	92	98	92	92	94	100	98	102	100	98	96	94	92	98	96
76	JS	1182643	29	M	162	65	24.8	WET GANGRENE	BK AMPUTATION	2	B	30/9/2021 01:00PM	T8	90	170	23	86.0	100.0	98	96	88	86	88	84	90	92	88	86	88	84	85	84	84	88	84	86	-	-	-	-	-	-	-	-
77	JD	555426	18	M	164	70	26.0	BRODIE ABSCESS	Incision & drainage	1	C	01-10-2021 11:00	T8	120	190	21	57.0	72.0	76	74	70	66	62	64	60	61	58	54	58	60	58	60	60	58	60	58	60	61	58	56	58	60	-	-
78	SS	1182993	39	F	156	63	25.9	POCO FEMUR IMPLANT	FEMUR IMPLANT REMOVAL	2	A	01-10-2021	T10	150	180	22	75.0	79.0	76	74	78	80	81	78	74	70	68	66	66	65	64	64	65	66	78	70	74	70	68	66	66	65	64	66
79	MK	1188767	44	M	170	70	24.2	DISTAL FEMUR FRACTURE SHAFT RIGHT SIDE	CRIF	3	B	14-10-2021 12:00	T8	120	190	22	78.0	80.0	74	70	68	70	72	74	70	68	66	68	68	70	74	70	70	68	74	74	70	68	66	68	68	70	-	-
80	PK	1190744	55	F	159	50	19.8	FRACTURE TRIMALLEOLAR RIGHT SIDE	ORIF	3	C	14-10-2021 02:00	T10	120	180	22	68.0	81.0	72	74	70	72	74	76	74	70	72	70	68	66	70	66	66	68	76	70	74	70	72	70	68	66	-	-
81	LS	1182140	35	M	164	74	27.5	POCO ORIF DISTAL FEMUR	DERIDEMENT AND ANTIBIOTIC CEMENT INSERYION	2	B	14/10/21 02:30PM	T8	90	180	22	106.0	114.0	116	108	106	110	106	102	108	110	102	101	100	98	102	98	98	100	102	102	-	-	-	-	-	-	-	-
82	GS	1353830	48	M	165	72	26.4	POCO FRACTURE TIBIA WITH EXFIX IN SITU	SSG	2	A	11-08-2022 15:00	T10	60	180	22	108.0	110.0	116	108	110	111	118	116	112	116	114	111	110	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	ML	1137074	34	M	170	76	26.3	FUCO FRACTURE BOTH BONE LEG LEFT SIDE	CRIF	2	B	14-10-2021	T8	120	170	22	112.0	115.0	110	106	110	112	108	110	108	112	110	106	110	112	106	112	112	110	110	106	108	112	110	106	110	112	-	-
84	DD	1359969	29	M	158	70	28.0	FRACTURE DISTAL FEMUR LEFT	CRIF DISTAL FEMUR LEFT	1	A	16-08-2022	T8	90	170	22	110.0	120.0	112	106	108	110	116	110	106	108	110	108	108	110	108	110	110	108	110	108	-	-	-	-	-	-	-	-
85	DR	1345809	46	M	161	85	32.8	OSTEOMYELITIS LEFT KNEE	DECOMPRESSION OF FEMUR	2	C	19-08-2022 09:00	T8	75	180	22	82.0	90.0	84	82	88	86	82	84	88	86	88	90	92	90	82	90	90	-	-	-	-	-	-	-	-	-	-	-	-	-
86	IS	1362196	40	M	165	106	38.9	FRACTURE PROXIMAL TIBIA RIGHT SIDE	ORIF	1	B	19-08-2022 11:00	T8	105	190	21	64.0	70.0	68	66	63	64	66	64	66	68	62	64	68	66	69	66	66	68	64	69	66	68	62	-	-	-	-	-	-
87	NM	1361887	51	M	163	97	36.5	POCO NON UNITED FRACTURE OF SHAFT TIBIA	IMPLANT REMOVAL + TIBIA NAILING	2	C	19-08-2022 13:30	T6	105	180	22	84.0	80.0	75	76	77	68	64	62	64	62	60	69	72	70	68	70	70	72	62	64	64	62	60	-	-	-	-	-	-
88	RS	1310383	26	M	168	85	30.1	POCO TIBIA FRACTURE BB LEG WITH EX-FIX IN SITU	TIBIA NAILING	2	B	19-08-2022 14:30	T8	105	180	22	86.0	94.0	90	92	94	90	92	90	88	87	95	88	92	84	85	84	84	92	90	85	88	87	95	-	-	-	-	-	-
89	SS	1362199	45	M	165	78	28.7	CRUSH FOOT RIGHT KNEE	K- WIRE FIXATION	1	C	19-08-2022 15:00	T10	60	190	23	78.0	84.0	80	78	72	76	70	68	66	64	70	72	68	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	KS	1359753	30	M	160	80	31.3	POCO EX-FIX ACROSS KNEE	DEBRIDEMENT AND ANTIBIOTIC BEAD REPLACEMENT	2	A	20-08-2022 14:00	T8	45	170	23	68.0	86.0	82	70	76	74	80	86	82	84	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	SK	1340332	60	F	156	60	24.7	FUCO INFECTED TKR	DEBRIDEMENT RIGHT KNEE	2	A	20-08-2022 15:10	T8	45	160	23	64.0	76.0	72	64	62	64	60	58	56	54	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
92	N	1362826	54	M	167	90	32.3	FRACTURE SHAFT TIBIA RIGHT	TIBIA NAILING RIGHT SIDE	1	B	20-08-2022 13:30	T8	105	190	23	76.0	80.0	78	80	82	80	74	72	70	68	66	64	64	62	64	62	62	64	72	64	70	68	66	-	-	-	-	-	-
93	MS	1332427	43	M	167	88	31.6	POCO EX-FIX OVER RIGHT LOWER LIMB	SPLIT SKIN GRAFT	2	C	20-08-2022 16:15	T8	45	180	23	88.0	85.0	84	82	88	86	82	84	80	88	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	KV	1353669	23	M	164	93	34.6	POCO TIBIA NAIL RIGHT	DEBRIDEMENT	2	B	20-08-2022 04:30	T8	45	180	23	86.0	92.0	90	92	88	86	84	82	80	80	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	S	1362400	60	F	156	65	26.7	CELLULITIS RIGHT SIDE FOOT	FOREFOOT AMPUTATION	3	C	20-08-2022	T8	50	180	23	98.0	80.0	76	74	80	72	70	66	68	68	64	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	JK	1362607	24	F	154	70	29.5	ACL TEAR RIGHT KNEE	ARTHROSCOPIC ACL REPAIR	1	B	23-08-2022 09:00	T8	135	190	21	102.0	110.0	108	110	108	102	106	110	108	108	106	102	106	102	110	102	102	106	110	110	108	108	106	99	93	88	86	84
97	GG	1359768	38	M	150	70	31.1	FUCO B/L CRUSH FOOT	DEBRIDEMENT AND VAC APPLICATION	1	C	23-08-2022 17:00	T8	50	190	21	110.0	115.0	112	110	108	106	106	104	102	100	99	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	AD	1364367	32	M	153	65	27.8	BONY LESION PROXIMAL FEMUR LEFT SIDE	BIOPSY AND CURETTAGE +ORIF FEMUR LEFT	2	B	23-08-2022 02:00	T6	105	170	21	74.0	75.0	74	78	80	78	74	76	72	76	74	72	74	78	80	78	78	74	76	80	72	76	74	-	-	-	-	-	-
99	HK	1360565	35	M	153	56	23.9	POCO TIBIA EX-FIX WITH FASCIOTOMY	WOUND CLOSURE	1	C	23-08-2022 17:00	T8	60	190	22	106.0	120.0	112	106	108	110	108	106	102	100	102	106	108	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	SD	1363584	58	F	150	40	17.8	RIGHT DIABETIC FOOT	DEBRIDEMENT	3	B	24-08-2022 04:30	T8	45	180	21	62.0	66.0	62	64	66	60	58	58	56	58	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	SK	1360574	46	M	165	95	34.9	POCO CRIF RIGHT FEMUR NAIL	IMPLANT REMOVAL	2	B	24-08-2022 11:00	T8	60	180	21	96.0	99.0	94	100	99	94	92	91	98	100	96	92	94	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	PJ	1365352	57	M	156	56	23.0	CLOSED NECK OF FEMUR FRACTURE LEFT SIDE	HEMIARTHROPLASTY	2	B	24-08-2022 09:00	T6	60	180	22	116.0	115.0	110	114	109	108	111	112	108	106	104	102	102	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	JS	1334097	19	M	162	83	31.6	ACL TEAR RIGHT SIDE	ARTHROSCOPIC ACL RECONSTRUCTION	1	B	24-08-2022 11:00	T8	90	180	23	80.0	84.0	82	84	80	78	78	80	82	84	82	86	82	80	78	80	80	82	80	82	-	-	-	-	-	-	-	-
104	KS	1355669	23	M	164	82	30.5	POCO TIBIA NAIL & VAC APPLICATION	SUTURING	2	C	25-08-2022 06:00	T10	60	180	22	102.0	110.0	102	100	98	96	98	98	92	96	94	92	94	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	SR	233542	60	F	151	59	25.9	FUCO INFECTED FEMUR NAILING	DEBRIDEMENT AND IRRIGATION OF WOUND	3	A	26-08-2022 04:30	T6	60	190	21	70.0	84.0	80	82	80	81	82	81	80	78	78	76	74	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	NK	1364289	31	F	156	56	23.0	CELLULITIS LEFT LOWER LIMB	Incision & drainage	3	B	26-08-2022 04:00	T10	60	180	22	110.0	99.0	97	96	94	88	84	86	84	80	82	78	78	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107	SN	713825	35	M	167	62	22.2	FUCO NON UNION FRACTURE SHAFT TIBIA RIGHT SIDE	IMPLANT REMOVAL	2	C	26-08-2022 09:00	T6	120	180	22	70.0	100.0	98	96	88	82	80	78	74	76	74	76	78	80	82	80	80	78	78	82	74	76	74	76	78	80	-	-	-	-
108	SS	1362199	45	M	176	70	22.6	POCO CRUSH FOOT RIGHT SIDE	SPLIT SKIN GRAFT	1	B	26-08-2022 12:30	T10	60	190	23	106.0	115.0	116	108	106	110	106	102	108	110	102	101	100	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	KS	1359753	30	M	180	85	26.2	POCO DISTAL FEMUR FIXATION	DEBRIDEMENT	2	A	26-08-2022	T8	60	170	23	92.0	90.0	89	89	88	87	85	84	86	87	88	90	92	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	RS	1359977	29	M	182	66	19.9	SEPTIC ARTHRITIS	DIAGNOSTIC NEEDLE ASPIRATION OF HIP JOINT	1	C	29-08-2022 12:00	T6	45	180	22	86.0	86.0	85	84	80	78	72	70	69	65	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	KS	1359753	30	M	176	78	25.2	POCO DISTAL FEMUR FIXATION	DEBRIDEMENT OF WOUND RIGHT KNEE	2	C	29-08-2022 09:00	T10	60	180	21	74.0	74.0	72	68	70	68	66	70	72	64	66	60	62	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112	NS	1026268	37	M	174	70	23.1	FRACTURE PROXIMAL TIBIA EX-FIX IN SITU RIGHT	ORIF TIBIA RIGHT	1	C	30-08-2022 11:00	T8	90	170	22	86.0	88.0	80	82	84	80	82	80	76	74	80	82	84	74	76	74	74	84	80	76	-	-	-	-	-	-	-	-
113	DD	1359969	29	M	183	82	24.5	DISTAL FEMUR FRACTURE LEFT SIDE WITH EX-FIX IN SITU	DEBRIDEMENT AND SUTURING	1	B	30-08-2022 11:00	T8	45	190	20	110.0	99.0	100	98	92	94	96	92	90	88	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114	HS	1222829	28	M	176	65	21.0	FUCO KNEE STIFFNESS RIGHT SIDE	QUADRIPLASTY	1	A	31-08-2022 03:00	T8	120	170	21	82.0	85.0	82	84	85	86	88	90	90	88	86	88	84	82	88	82	82	84	90	88	90	88	86	88	84	82	-	-
115	KS	1359753	42	M	173	55	18.4	POCO DISTAL FEMUR FIXATION	VAC APPLICATION	2	C	31-08-2022 03:00	T10	45	180	21	110.0	105.0	102	110	100	96	98	104	106	98	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116	AS	1369549	25	M	180	84	25.9	COMPLETE ACL TEAR	ARTHROSCOPIC ACL RECONSTRUCTION	2	A	31-08-2022 09:00	T8	105	180	22	108.0	110.0	106	108	110	100	108	110	116	112	108	112	110	108	110	108	108	110	110	110	116	112	108	-	-	-	-	-	-
117	KJ	1366863	42	F	167	68	24.4	RIGHT FEMORAL ARTERY THROMBOSIS	ABOVE KNEE AMPUTATION	3	A	01-09-2022 04:00	T8	75	190	22	84.0	88.0	86	82	84	82	86	84	88	86	88	86	82	86	88	86	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-

S.no	HR 135	HR 140	HR 145	HR 150	AFTER SHIFTING TO PACU HR 0	PACU HR 30	PACU HR 60	PACU HR 90	PACU HR 120	PACU HR 150	PACU HR 180	PACU HR 210	PACU HR 240	PACU HR 270	PACU HR 300	PACU HR 330	PACU HR 360	SBP Base line	SBP 0	SBP 5	SBP 10	SBP 15	SBP 20	SBP 25	SBP 30	SBP 35	SBP 40	SBP 45	SBP 50	SBP 55	SBP 60	SBP 65	SBP 70	SBP 75	SBP 80	SBP 85	SBP 90	SBP 95	SBP 100	SBP 105	SBP 110	SBP 115	SBP 120	SBP 125	SBP 130	SBP 135	SBP 140	SBP 145
61	-	-	-	-	62	70	66	62	62	70	72	64	62	68	72	62	72	140	142	138	126	132	128	130	136	138	140	140	138	142	148	140	150	136	138	140	140	138	142	148	140	150	136	-	-	-	-	-
62	-	-	-	-	62	62	60	63	62	62	64	65	64	63	64	66	65	160	168	170	165	157	139	141	125	141	138	138	146	143	158	146	141	138	141	138	138	146	143	158	146	132	125	-	-	-	-	-
63	-	-	-	-	74	66	70	74	68	66	68	70	68	68	68	74	68	140	140	138	135	134	133	130	128	130	130	134	135	140	138	138	139	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	74	70	72	74	64	70	69	75	64	70	69	74	69	118	120	113	92	110	100	98	110	100	98	102	100	104	102	100	104	110	100	98	102	100	104	102	100	104	110	-	-	-	-	-
65	-	-	-	-	89	90	88	89	96	90	92	90	96	88	92	89	92	124	114	110	110	116	111	112	110	110	107	105	105	108	100	100	100	110	110	107	105	105	108	100	100	100	110	-	-	-	-	-
66	-	-	-	-	67	67	68	67	69	67	72	80	69	73	72	67	72	122	119	104	113	112	123	112	113	122	120	132	124	124	125	124	120	113	122	120	132	124	124	125	124	120	113	-	-	-	-	-
67	-	-	-	-	70	80	74	70	78	80	82	72	78	80	82	70	82	130	130	128	120	100	106	110	116	110	106	108	104	110	116	120	104	116	110	106	108	110	116	120	113	116	-	-	-	-	-	-
68	-	-	-	-	92	92	90	92	90	92	86	90	90	86	84	92	90	130	138	113	120	104	110	120	116	124	126	122	118	110	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	-	-	-	-	96	85	92	96	90	85	84	108	90	85	84	96	84	126	124	113	111	110	116	108	112	110	105	110	100	100	106	108	106	112	110	105	110	100	100	106	108	106	112	-	-	-	-	-
70	-	-	-	-	94	92	92	94	96	92	94	99	96	90	94	94	94	132	130	122	110	106	108	110	116	117	114	111	101	110	106	108	113	116	117	114	111	-	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	80	86	82	80	84	86	84	78	84	82	84	80	84	120	120	122	106	120	116	118	112	116	110	106	110	112	118	113	113	112	116	110	106	110	112	118	113	108	112	-	-	-	-	-
72	-	-	-	-	100	100	102	100	96	100	102	98	96	106	102	100	102	132	116	103	100	110	111	112	107	105	100	108	100	110	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	-	-	-	-	90	84	88	90	86	84	88	96	86	88	88	90	88	160	164	158	148	131	128	132	142	146	150	158	148	146	142	158	146	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74	-	-	-	-	104	96	100	104	102	96	98	106	102	96	98	104	98	136	140	132	130	120	120	122	118	120	116	122	118	126	122	118	112	118	120	116	122	118	126	122	118	112	118	-	-	-	-	-
75	92	96	94	92	102	96	100	102	98	96	94	92	98	92	94	102	94	140	132	128	122	126	130	131	122	136	142	130	134	132	128	130	126	122	136	142	130	134	132	128	130	126	122	136	142	130	134	132
76	-	-	-	-	90	86	92	90	88	86	88	88	88	84	88	90	88	134	132	128	136	120	112	122	130	128	132	130	128	122	126	132	128	130	128	132	130	-	-	-	-	-	-	-	-	-	-	-
77	-	-	-	-	60	54	61	60	58	54	58	62	58	60	58	60	58	130	132	138	121	120	126	128	136	140	142	132	130	131	126	121	134	136	140	142	132	130	131	126	121	134	136	-	-	-	-	-
78	65	66	66	65	70	66	70	74	68	66	66	81	68	70	66	74	66	111	112	88	110	108	102	106	111	116	112	108	106	110	112	110	112	111	116	114	108	106	110	112	110	112	111	116	114	108	106	110
79	-	-	-	-	70	68	68	70	66	68	68	72	66	70	68	70	68	128	122	120	118	116	120	112	110	112	118	110	116	118	120	124	112	110	112	118	110	116	118	120	124	112	110	-	-	-	-	-
80	-	-	-	-	74	70	70	74	72	70	68	74	72	66	68	74	68	130	132	122	120	130	132	128	122	126	124	122	130	132	128	130	112	122	126	124	122	130	132	128	130	112	122	-	-	-	-	-
81	-	-	-	-	108	101	110	108	102	101	100	106	102	98	100	108	100	110	112	106	89	102	100	110	112	110	111	114	116	112	116	106	108	112	110	111	114	-	-	-	-	-	-	-	-	-	-	-
82	-	-	-	-	112	111	116	112	114	111	110	118	114	108	110	112	110	110	116	100	102	104	101	108	110	112	111	116	114	112	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	-	-	-	-	108	106	112	108	110	106	110	108	110	112	110	108	110	120	110	122	130	132	128	122	120	122	130	122	120	112	116	118	116	120	122	130	122	120	112	116	118	116	120	-	-	-	-	-
84	-	-	-	-	106	108	108	106	110	108	108	116	110	110	108	106	108	130	128	120	96	110	116	118	110	112	110	106	110	112	116	110	112	116	112	110	106	-	-	-	-	-	-	-	-	-	-	-
85	-	-	-	-	88	90	86	88	88	90	92	82	88	90	92	88	92	146	148	132	130	128	134	132	138	132	140	144	140	148	150	144	142	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-
86	-	-	-	-	66	64	68	66	62	64	68	66	62	66	68	66	68	135	138	138	132	130	122	120	118	111	117	108	110	112	110	109	117	118	111	117	108	110	112	110	-	-	-	-	-	-	-	-
87	-	-	-	-	64	69	62	64	60	69	72	64	60	70	72	64	72	140	142	139	128	136	130	134	130	127	125	128	126	128	125	120	122	128	127	125	128	126	128	125	-	-	-	-	-	-	-	-
88	-	-	-	-	88	88	87	88	95	88	92	92	95	84	92	88	92	140	132	130	140	142	130	132	144	130	126	130	140	146	130	110	114	144	130	126	130	140	146	130	-	-	-	-	-	-	-	-
89	-	-	-	-	66	72	64	66	70	72	68	70	70	70	68	66	68	140	142	138	122	110	100	106	110	112	120	122	116	118	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	82	90	84	82	86	90	88	80	86	86	88	82	88	120	122	94	106	100	108	100	106	104	110	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	-	-	-	-	56	58	54	56	54	58	60	60	54	62	60	56	60	142	131	130	122	134	121	112	110	116	120	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
92	-	-	-	-	70	64	68	70	66	64	64	74	66	62	64	70	64	140	132	120	134	136	138	132	130	142	141	132	131	136	134	132	130	130	142	141	132	131	136	134	-	-	-	-	-	-	-	-
93	-	-	-	-	80	82	88	80	86	82	84	82	86	86	84	80	84	146	148	110	122	130	134	148	144	140	131	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	-	-	-	-	80	80	80	80	78	80	84	84	78	82	84	80	84	116	120	106	102	110	112	116	110	106	104	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	-	-	-	-	68	70	68	68	64	70	72	70	64	68	72	68	72	144	142	142	140	132	148	150	152	147	146	146	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	85	-	-	-	108	102	108	108	106	102	106	106	106	102	106	108	106	140	138	141	146	142	145	140	138	139	136	132	142	140	148	140	142	138	139	136	132	142	140	148	136	128	126	124	126	124	-	-
97	-	-	-	-	102	98	100	102	99	98	100	106	99	96	100	102	100	160	166	123	106	121	134	140	146	150	152	148	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	-	-	-	-	72	72	76	72	74	72	74	74	74	78	74	72	74	140	138	120	112	110	116	110	108	104	110	116	112	114	116	112	102	108	104	110	116	112	114	116	-	-	-	-	-	-	-	-
99	-	-	-	-	102	106	100	102	102	106	108	108	102	110	108	102	108	166	158	140	138	120	112	122	124	128	126	122	120	112	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	56	62	58	56	60	62	61	58	60	62	61	56	61	122	121	112	90	111	116	110	112	118	116	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	-	-	-	-	98	92	100	98	96	92	94	92	96	98	94	98	94	136	138	104	122	124	122	126	124	122	128	122	130	132	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	-	-	-	-	108	102	106	108	104	102	102	111	104	100	102	108	102	130	126	108	110	106	104	110	102	116	112	108	110	111	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	-	-	-	-	82	86	84	82	82	86	82	78	82	80	82	82	82	110	106	104	100	90	96	100	102	104	110	116	108	112	116	108	112	116	104	110	116	-	-	-	-	-	-	-	-	-	-	-
104	-	-	-	-	92	92	96	92	94	92	94	98	94	96	94	92	94	148	132	130	128	122	132	130	128	132	132	134	130	132	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	-	-	-	-	80	76	78	80	78	76	74	82	78	76	74	80	74	130	132	128	126	120	126	121	124	112	111	122	126	122	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	-	-	-	-	84	78	80	84	82	78	78	84	82	78	78	84	78	126	117	108	110	111	111	110	112	100	110	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107	-	-	-	-	74	76	76	74	74	76	78	80	74	80	78	74	78	170	160	158	140	132	136	134	132	138	132	140	144	148	150	144	150	132	138	132	140	144	148	150	144	150	132	138	132	140	-	-
108	-	-	-	-	108	101	110	108	102	101	100	106	102	98	100	108	100	110	112	106	100	102	100	110	112	110	111	114	116	112	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	-	-	-	-	86	90	87	86	88	90	92	85	88	93	92	86	92	180	148	146	145	142	140	141	142	145	146	146	134	132	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	69	72	65	69	68	72	74	72	68	76	74	69	74	110	112	113	115	115	116	116	114	112	110	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	-	-	-	-	72	60	64	72	66	60	62	66	66	66	62	72	62	122	120	110	90	122	121	132	128	136	132	131	134	132	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112	-	-	-	-	76	82	74	76	80	82	84	82	80	74	84	76	84	122	120	110	106	104	106	110	112	122	120	126	120	118	124	122	120	112	122	120	126	-	-	-	-	-	-	-	-	-	-	-
113	-	-	-	-	90	90	88	90	89	90	90	96	89	88	90	90	90	130	136	122	106	120	116	122	120	126	124	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114	-	-	-	-	90	88	88	90	86	88	84	88	86	82	84	90	84	126	122	112	91	116	120	122	124	120	122	114	112	116	112	114	120	124	120	122	114	112	116	112	114	120	124	-	-	-	-	-
115	-	-	-	-	106	98	98	106	100	98	92	98	100	94	92	106	92	132	134	128	122	120	110	112	116	110	118	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116	-	-	-	-	116	112	112	116	108	112	110	108	108	108	110	116	110	164	160	158	142	132	138	140	156	158	166	164	162	150	158	150	162	156	158	166	164	162	150	158	-	-	-	-	-	-	-	-
117	-	-	-	-	88	86	86	88	88	86	82	86	88	86	82	88	82	120	122	104	90	100	104	106	110	112	110	124	122	126	124	122	120	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-

S.no	SBP 150	PACU SBP 00	PACU SBP 30	PACU SBP 60	PACU SBP 90	PACU SBP 120	PACU SBP 150	PACU SBP 180	PACU SBP 210	PACU SBP 240	PACU SBP 270	PACU SBP 300	PACU SBP 330	PACU SBP 360	DBP Base line	DBP 0	DBP 5	DBP 10	DBP 15	DBP 20	DBP 25	DBP 30	DBP 35	DBP 40	DBP 45	DBP 50	DBP 55	DBP 60	DBP 65	DBP 70	DBP 75	DBP 80	DBP 85	DBP 90	DBP 95	DBP 100	DBP 105	DBP 110	DBP 115	DBP 120	DBP 125	DBP 130	DBP 135	DBP 140	DBP 145	DBP 150
61	-	136.0	138.0	140.0	140.0	138.0	142.0	148.0	132	128	130	136	138	140	90.0	88.0	76.0	72.0	66.0	86.0	90.0	88.0	88.0	92.0	96.0	92.0	98.0	98.0	76	72	66	86	90	88	88	92.0	96.0	92.0	98.0	98.0	-	-	-	-	-	-
62	-	125.0	141.0	138.0	138.0	146.0	143.0	158.0	157	139	141	125	141	138	90.0	88.0	86.0	89.0	91.0	86.0	87.0	87.0	87.0	85.0	83.0	91.0	87.0	83.0	86	89	91	86	87	87	87	85.0	83.0	91.0	87.0	83.0	-	-	-	-	-	-
63	-	128.0	130.0	130.0	134.0	135.0	140.0	138.0	134	133	130	128	130	130	80.0	78.0	76.0	75.0	74.0	70.0	68.0	70.0	75.0	66.0	77.0	78.0	71.0	78.0	76	75	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	110.0	100.0	98.0	102.0	100.0	104.0	102.0	110	100	98	110	100	98	80.0	76.0	82.0	52.0	60.0	80.0	51.0	60.0	58.0	60.0	64.0	60.0	58.0	54.0	82	52	60	80	51	60	58	60.0	64.0	60.0	58.0	54.0	-	-	-	-	-	-
65	-	110.0	110.0	107.0	105.0	105.0	108.0	100.0	116	111	112	110	110	107	68.0	66.0	58.0	60.0	65.0	60.0	60.0	60.0	65.0	62.0	80.0	60.0	66.0	60.0	58	60	65	60	60	60	65	62.0	80.0	60.0	66.0	60.0	-	-	-	-	-	-
66	-	113.0	122.0	120.0	132.0	124.0	124.0	125.0	112	123	112	113	122	120	82.0	75.0	82.0	80.0	64.0	60.0	82.0	80.0	78.0	66.0	60.0	80.0	80.0	88.0	82	80	64	60	82	80	78	66.0	60.0	80.0	80.0	88.0	-	-	-	-	-	-
67	-	116.0	110.0	106.0	108.0	110.0	100.0	116.0	100	106	110	116	110	106	78.0	89.0	80.0	64.0	66.0	72.0	68.0	70.0	64.0	58.0	59.0	50.0	64.0	62.0	80	64	66	72	68	70	64	58.0	59.0	50.0	64.0	62.0	-	-	-	-	-	-
68	-	116.0	124.0	126.0	122.0	118.0	116.0	120.0	122	110	120	116	124	126	90.0	80.0	76.0	80.0	84.0	68.0	66.0	76.0	80.0	84.0	76.0	80.0	76	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	-	112.0	110.0	105.0	110.0	100.0	100.0	106.0	110	116	108	112	110	105	74.0	74.0	74.0	70.0	80.0	62.0	58.0	70.0	68.0	50.0	60.0	70.0	58.0	62.0	74	70	80	62	58	70	68	50.0	60.0	70.0	58.0	62.0	-	-	-	-	-	-
70	-	116.0	117.0	114.0	111.0	101.0	110.0	106.0	106	108	110	116	117	114	86.0	84.0	82.0	84.0	80.0	74.0	78.0	70.0	68.0	66.0	64.0	62.0	64.0	66.0	82	84	80	74	78	70	-	-	-	-	-	-	-	-	-	-	-	-
71	-	112.0	116.0	110.0	106.0	110.0	112.0	118.0	120	116	118	112	116	110	60.0	60.0	66.0	80.0	64.0	66.0	70.0	72.0	61.0	66.0	70.0	58.0	71.0	76.0	66	80	64	66	70	72	61	66.0	70.0	58.0	71.0	76.0	-	-	-	-	-	-
72	-	107.0	105.0	100.0	108.0	100.0	110.0	112.0	110	111	112	107	105	100	78.0	70.0	50.0	64.0	72.0	60.0	64.0	62.0	60.0	60.0	62.0	65.0	68.0	70.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	-	142.0	146.0	150.0	158.0	148.0	146.0	142.0	131	128	132	142	146	150	90.0	90.0	99.0	96.0	92.0	88.0	90.0	76.0	76.0	74.0	80.0	84.0	82.0	88.0	99	96	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74	-	118.0	120.0	116.0	122.0	118.0	126.0	122.0	120	120	122	118	120	116	84.0	86.0	58.0	80.0	68.0	64.0	70.0	72.0	76.0	66.0	70.0	68.0	64.0	88.0	58	80	68	64	70	72	76	66.0	70.0	68.0	64.0	88.0	-	-	-	-	-	-
75	136	122.0	136.0	142.0	130.0	134.0	132.0	128.0	126	130	131	122	136	142	80.0	84.0	66.0	68.0	74.0	88.0	98.0	84.0	82.0	99.0	86.0	90.0	94.0	88.0	66	68	74	88	98	84	82	99.0	86.0	90.0	94.0	88.0	66	68	74	84	82	99.0
76	-	130.0	128.0	132.0	130.0	128.0	122.0	126.0	120	112	122	130	128	132	86.0	82.0	80.0	76.0	84.0	80.0	86.0	66.0	78.0	68.0	88.0	74.0	68.0	66.0	80	76	84	80	86	66	-	-	-	-	-	-	-	-	-	-	-	-
77	-	136.0	140.0	142.0	132.0	130.0	131.0	126.0	120	126	128	136	140	142	78.0	62.0	66.0	70.0	72.0	74.0	70.0	72.0	70.0	74.0	76.0	74.0	66.0	68.0	66	70	72	74	70	72	70	74.0	76.0	74.0	66.0	68.0	-	-	-	-	-	-
78	116	111.0	116.0	112.0	108.0	106.0	110.0	112.0	108	102	106	111	116	112	78.0	74.0	58.0	61.0	66.0	64.0	72.0	56.0	62.0	64.0	74.0	70.0	70.0	66	58	61	66	64	72	56	62	64.0	74.0	70.0	70.0	66	58	61	66	56	62	64.0
79	-	110.0	112.0	118.0	110.0	116.0	118.0	120.0	116	120	112	110	112	118	86.0	88.0	82.0	80.0	84.0	68.0	66.0	72.0	74.0	70.0	70.0	68.0	64.0	70.0	82	80	84	68	66	72	74	70.0	70.0	68.0	64.0	70.0	-	-	-	-	-	-
80	-	122.0	126.0	124.0	122.0	130.0	132.0	128.0	130	132	128	122	126	124	70.0	68.0	64.0	58.0	66.0	64.0	72.0	74.0	61.0	58.0	62.0	69.0	70.0	74.0	64	58	66	64	72	74	61	58.0	62.0	69.0	70.0	74.0	-	-	-	-	-	-
81	-	112.0	110.0	111.0	114.0	116.0	112.0	116.0	102	100	110	112	110	111	76.0	78.0	72.0	58.0	56.0	72.0	71.0	66.0	73.0	78.0	60.0	68.0	54.0	62.0	72	58	56	72	71	66	-	-	-	-	-	-	-	-	-	-	-	-
82	-	110.0	112.0	111.0	116.0	114.0	112.0	120.0	104	101	108	110	112	111	70.0	68.0	52.0	54.0	58.0	62.0	64.0	61.0	66.0	68.0	70.0	72.0	71.0	64.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	-	120.0	122.0	130.0	122.0	120.0	112.0	116.0	132	128	122	120	122	130	78.0	76.0	70.0	68.0	66.0	72.0	70.0	64.0	69.0	71.0	68.0	74.0	70.0	66.0	70	68	66	72	70	64	69	71.0	68.0	74.0	70.0	66.0	-	-	-	-	-	-
84	-	110.0	112.0	110.0	106.0	110.0	112.0	116.0	110	116	118	110	112	110	80.0	76.0	74.0	66.0	68.0	54.0	60.0	62.0	66.0	60.0	68.0	66.0	70.0	68.0	74	66	68	54	60	62	-	-	-	-	-	-	-	-	-	-	-	-
85	-	138.0	132.0	140.0	144.0	140.0	148.0	150.0	128	134	132	138	132	140	78.0	100.0	98.0	96.0	86.0	90.0	86.0	100.0	98.0	96.0	98.0	96.0	100.0	98.0	98	96	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
86	-	118.0	111.0	117.0	108.0	110.0	112.0	110.0	130	122	120	118	111	117	87.0	88.0	90.0	96.0	76.0	71.0	72.0	70.0	68.0	68.0	64.0	66.0	58.0	56.0	90	96	76	68	66	72	74	70.0	70.0	-	-	-	-	-	-	-	-	-
87	-	130.0	127.0	125.0	128.0	126.0	128.0	125.0	136	130	134	130	127	125	98.0	90.0	80.0	86.0	74.0	72.0	68.0	74.0	70.0	73.0	71.0	70.0	74.0	76.0	80	86	74	72	68	74	70	73.0	71.0	-	-	-	-	-	-	-	-	-
88	-	144.0	130.0	126.0	130.0	140.0	146.0	130.0	142	130	132	144	130	126	82.0	70.0	68.0	62.0	68.0	68.0	74.0	64.0	66.0	74.0	75.0	80.0	74.0	72.0	68	62	68	68	74	64	66	74.0	75.0	-	-	-	-	-	-	-	-	-
89	-	110.0	112.0	120.0	122.0	116.0	118.0	120.0	110	100	106	110	112	120	98.0	86.0	88.0	78.0	68.0	60.0	72.0	70.0	68.0	62.0	64.0	68.0	66.0	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	-	106.0	104.0	110.0	106.0	108.0	100.0	102.0	100	108	110	106	104	110	68.0	60.0	62.0	64.0	58.0	60.0	64.0	66.0	56.0	58.0	60.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	-	110.0	116.0	120.0	126.0	124.0	121.0	120.0	134	121	112	110	116	120	98.0	80.0	74.0	71.0	78.0	64.0	52.0	68.0	66.0	74.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
92	-	130.0	142.0	141.0	132.0	131.0	136.0	134.0	136	138	132	130	142	141	78.0	68.0	61.0	64.0	70.0	78.0	80.0	86.0	84.0	82.0	98.0	94.0	84.0	86.0	61	64	70	78	80	86	84	82.0	98.0	-	-	-	-	-	-	-	-	-
93	-	144.0	140.0	131.0	140.0	148.0	150.0	142.0	144	140	148	144	140	131	86.0	100.0	90.0	96.0	98.0	96.0	100.0	96.0	92.0	90.0	98.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	-	110.0	106.0	104.0	106.0	110.0	110.0	118.0	110	112	116	110	106	104	84.0	76.0	68.0	54.0	82.0	84.0	80.0	82.0	80.0	76.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	-	152.0	147.0	146.0	146.0	150.0	150.0	150.0	132	148	150	152	147	146	86.0	100.0	88.0	70.0	86.0	100.0	90.0	96.0	90.0	94.0	96.0	92.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	-	138.0	139.0	136.0	132.0	142.0	140.0	148.0	142	145	140	138	139	136	96.0	98.0	100.0	80.0	82.0	76.0	78.0	80.0	84.0	92.0	91.0	96.0	92.0	94.0	100	80	82	76	78	80	84	92.0	91.0	96.0	92.0	94.0	80	80	82	-	-	-
97	-	146.0	150.0	152.0	148.0	150.0	158.0	162.0	132	138	140	146	150	152	90.0	98.0	82.0	80.0	96.0	92.0	96.0	88.0	90.0	92.0	96.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	-	108.0	104.0	110.0	116.0	112.0	114.0	116.0	110	116	110	108	104	110	80.0	86.0	74.0	72.0	68.0	66.0	52.0	58.0	60.0	64.0	64.0	66.0	68.0	66.0	74	72	68	66	52	58	60	64.0	64.0	-	-	-	-	-	-	-	-	-
99	-	124.0	128.0	126.0	122.0	120.0	112.0	116.0	120	112	122	124	128	126	98.0	92.0	84.0	70.0	64.0	66.0	68.0	70.0	70.0	72.0	74.0	80.0	82.0	84.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	112.0	118.0	116.0	112.0	110.0	110.0	111.0	111	116	110	112	118	116	84.0	76.0	72.0	64.0	60.0	62.0	60.0	68.0	66.0	58.0	60.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	-	124.0	122.0	128.0	122.0	130.0	132.0	138.0	124	122	126	124	122	128	84.0	82.0	86.0	70.0	72.0	70.0	80.0	86.0	81.0	82.0	84.0	82.0	84.0	80.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	-	102.0	116.0	112.0	108.0	110.0	111.0	102.0	106	104	110	102	116	112	78.0	76.0	64.0	52.0	54.0	66.0	64.0	72.0	74.0	70.0	72.0	76.0	72.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	-	102.0	104.0	110.0	116.0	108.0	112.0	116.0	90	96	100	102	104	110	74.0	76.0	70.0	68.0	54.0	52.0	60.0	66.0	72.0	70.0	74.0	76.0	72.0	74.0	70	68	54	52	60	66	-	-	-	-	-	-	-	-	-	-	-	-
104	-	128.0	132.0	132.0	134.0	130.0	132.0	138.0	122	132	130	128	132	132	100.0	98.0	74.0	86.0	71.0	88.0	84.0	88.0	96.0	86.0	82.0	84.0	88.0	76.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	-	124.0	112.0	111.0	122.0	126.0	122.0	128.0	120	126	121	124	112	111	80.0	84.0	82.0	86.0	80.0	80.0	81.0	84.0	76.0	78.0	80.0	74.0	76.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	-	112.0	100.0	110.0	100.0	100.0	100.0	100.0	111	111	110	112	100	110	82.0	66.0	57.0	66.0	68.0	66.0	62.0	70.0	56.0	64.0	53.0	58.0	56.0	54.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107	-	132.0	138.0	132.0	140.0	144.0	148.0	150.0	132	136	134	132	138	132	100.0	98.0	90.0	80.0	68.0	74.0	90.0	86.0	100.0	98.0	98.0	98.0	100.0	98.0	90	80	68	74	90	86	100	98.0	98.0	98.0	100.0	98.0	-	-	-	-	-	-
108	-	112.0	110.0	111.0	114.0	116.0	112.0	116.0	102	100	110	112	110	111	70.0	78.0	72.0	58.0	56.0	72.0	71.0	86.0	73.0	78.0	60.0	68.0	54.0	62.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	-	142.0	145.0	146.0	146.0	150.0	152.0	153.0	142	140	141	142	145	146	90.0	90.0	88.0	86.0	84.0	82.0	81.0	82.0	83.0	84.0	86.0	90.0	92.0	90.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	-	114.0	112.0	110.0	108.0	105.0	100.0	105.0	115	116	116	114	112	110	70.0	72.0	73.0	75.0	77.0	78.0	77.0	75.0	74.0	70.0	68.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	-	128.0	136.0	132.0	131.0	134.0	132.0	138.0	122	121	132	128	136	132	86.0	78.0	66.0	72.0	71.0	64.0	88.0	72.0	88.0	98.0	86.0	82.0	88.0	86.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112	-	112.0	122.0	120.0	126.0	120.0	118.0	124.0	104	106	110	112	122	120	84.0	82.0	76.0	66.0	54.0	60.0	74.0	80.0	82.0	78.0	80.0	86.0	82.0	74.0	76	66	54	60	74	80	-	-	-	-	-	-	-	-	-	-	-	-
113	-	120.0	126.0	124.0	122.0	120.0	124.0	106.0	120	116	122	120	126	124	80.0	88.0	80.0	84.0	82.0	80.0	76.0	74.0	72.0	74.0	76.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114	-	124.0	120.0	122.0	114.0	112.0	116.0	112.0	116	120	122	124	120	122	84.0	74.0	68.0	68.0	66.0	74.0	72.0	70.0	84.0	80.0	78.0	76.0	74.0	80.0	68	68	66	74	72	70	84	80.0	78.0	76.0	74.0	80.0	-	-	-	-	-	-
115	-	116.0	110.0	118.0	110.0	116.0	120.0	122.0	120	110	112	116	110	118	84.0	74.0	76.0	70.0	68.0	54.0	62.0	66.0	68.0	68.0	66.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116	-	156.0	158.0	166.0	164.0	162.0	150.0	158.0	132	138	140	156	158	166	98.0	100.0	98.0	92.0	80.0	74.0	90.0	100.0	92.0	98.0	92.0	94.0	92.0	96.0	98	92	80	74	90	100	92	98.0	92.0	-	-	-	-	-	-	-	-	-
117	-	110.0	112.0	110.0	124.0	122.0	126.0	124.0	100	104	106	110	112	110	86.0	68.0	70.0	54.0	66.0	62.0	60.0	70.0	72.0	70.0	78.0	64.0	90.0	74.0	70	54	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-

S.no	AFTER SHIFTING TO PACU DBP 00	PACU DBP 30	PACU DBP 60	PACU DBP 90	PACU DBP 120	PACU DBP 150	PACU DBP 180	PACU DBP 210	PACU DBP 240	PACU DBP 270	PACU DBP 300	PACU DBP 330	PACU DBP 360	MAP BASELINE	MAP 0 MIN IMMEDIATELY AFTER SPINAL	MAP 5MIN	MAP 10 MIN	MAP 15 MIN	MAP 20 MIN	MAP 25 MIN	MAP 30 MIN	MAP 35 MIN	MAP 40MIN	MAP 45MIN	MAP 50 MIN	MAP 55 MIN	MAP 60	MAP 65 MIN	MAP 70 MIN	MAP 75 MIN	MAP 80MIN	MAP 85MIN	MAP 90 MIN	MAP 95 MIN	MAP 100 MIN
61	72	66	86	72.0	66.0	86.0	90.0	88.0	88.0	90	88	88	92.0	130	106	97	90	88	100	103	104	105	108	111	107	113	115	97	98	89	103	107	105	105	109
62	89	91	86	89.0	91.0	86.0	87.0	87.0	87.0	87	87	87	91.0	140	115	114	114	113	104	105	100	105	103	101	109	106	108	106	106	107	104	104	104	107	104
63	75	74	70	75.0	74.0	70.0	68.0	70.0	75.0	68	70	75	78.0	123	99	97	95	94	91	89	89	93	87	96	97	94	98	97	96	92					
64	52	60	80	52.0	60.0	80.0	51.0	60.0	58.0	51	60	58	60.0	112	91	92	65	77	87	67	77	72	73	77	73	73	70	88	69	77	87	67	74	72	75
65	60	65	60	60.0	65.0	60.0	60.0	60.0	65.0	60	60	65	60.0	107	82	75	77	82	77	77	77	80	77	88	75	80	73	72	73	80	77	76	75	78	77
66	80	64	60	80.0	64.0	60.0	82.0	80.0	78.0	82	80	78	80.0	116	90	89	91	80	81	92	91	93	84	84	95	95	100	96	93	80	81	95	97	93	85
67	64	66	72	64.0	66.0	72.0	68.0	70.0	64.0	68	70	64	50.0	117	103	96	83	77	83	82	85	79	74	75	68	79	80	93	77	83	85	81	83	79	72
68	80	84	68	80.0	84.0	68.0	66.0	76.0	80.0	66	76	80	80.0	125	99	88	93	91	82	84	89	95	98	91	93	87	77								
69	70	80	62	70.0	80.0	62.0	58.0	70.0	68.0	58	70	68	70.0	112	91	87	84	90	80	75	84	82	68	77	80	72	77	85	82	91	78	74	83	79	67
70	84	80	74	84.0	80.0	74.0	78.0	70.0	68.0	78	70	68	62.0	123	99	95	93	89	85	89	85	84	82	80	75	79	79	91	94	92	88	90	84		
71	80	64	66	80.0	64.0	66.0	70.0	72.0	61.0	70	72	61	58.0	100	80	85	89	83	83	86	85	79	81	82	75	85	90	82	91	80	83	83	83	77	81
72	64	72	60	64.0	72.0	60.0	64.0	62.0	60.0	64	62	60	65.0	118	85	68	76	85	77	80	77	75	73	77	77	82	84								
73	96	92	88	96.0	92.0	88.0	90.0	76.0	76.0	90	76	76	84.0	140	115	119	113	105	101	104	98	99	99	106	105	103	106	119	113	108					
74	80	68	64	80.0	68.0	64.0	70.0	72.0	76.0	70	72	76	68.0	124	104	83	97	85	83	87	87	91	83	87	85	85	99	78	91	85	83	85	89	90	86
75	68	74	88	68.0	74.0	88.0	98.0	84.0	82.0	98	84	82	90.0	123	100	87	86	91	102	109	97	100	113	101	105	107	101	87	87	90	104	113	99	99	110
76	76	84	80	76.0	84.0	80.0	86.0	66.0	78.0	86	66	78	74.0	124	99	96	96	96	91	98	87	95	89	102	92	86	86	97	93	99	96	101	87		
77	70	72	74	70.0	72.0	74.0	70.0	72.0	70.0	70	72	70	74.0	117	85	90	87	88	91	89	93	93	97	95	93	88	87	84	91	93	96	94	92	90	93
78	61	66	64	61.0	66.0	64.0	72.0	56.0	62.0	72	56	62	70.0	108	87	68	77	80	77	83	74	80	80	85	82	83	81	75	78	81	81	86	73	77	79
79	80	84	68	80.0	84.0	68.0	66.0	72.0	74.0	66	72	74	68.0	121	99	95	93	95	85	81	85	87	86	83	84	82	87	96	91	93	83	83	85	88	86
80	58	66	64	58.0	66.0	64.0	72.0	74.0	61.0	72	74	61	69.0	112	89	83	79	87	87	91	90	83	80	82	89	91	92	86	76	85	85	89	90	84	83
81	58	56	72	58.0	56.0	72.0	71.0	66.0	73.0	71	66	73	68.0	106	89	83	68	71	81	84	81	85	89	78	84	73	80	83	75	75	85	84	82		
82	54	58	62	54.0	58.0	62.0	64.0	61.0	66.0	64	61	66	72.0	102	84	68	70	73	75	79	77	81	82	85	86	85	83								
83	68	66	72	68.0	66.0	72.0	70.0	64.0	69.0	70	64	69	74.0	112	87	87	89	88	91	87	83	87	91	86	89	84	83	86	84	84	89	90	83	86	85
84	66	68	54	66.0	68.0	54.0	60.0	62.0	66.0	60	62	66	66.0	118	93	89	76	82	75	79	78	81	77	81	81	84	84	86	81	84	73	77	77		
85	96	86	90	96.0	86.0	90.0	86.0	100.0	98.0	86	100	98	96.0	125	116	109	107	100	105	101	113	109	111	113	111	116	115	113	111	103					
86	96	76	71	96.0	76.0	71.0	72.0	70.0	68.0	72	70	68	66.0	126	105	106	108	94	88	88	86	82	84	79	81	76	74	96	103	90	82	83	84	86	84
87	86	74	72	86.0	74.0	72.0	68.0	74.0	70.0	68	74	70	70.0	135	107	100	100	95	91	90	93	89	90	90	89	92	92	93	98	92	90	87	92	89	91
88	62	68	68	62.0	68.0	68.0	74.0	64.0	66.0	74	64	66	80.0	125	91	89	88	93	89	93	91	87	91	93	100	98	91	82	79	93	89	91	86	91	98
89	78	68	60	78.0	68.0	60.0	72.0	70.0	68.0	72	70	68	68.0	135	105	105	93	82	73	83	83	83	81	83	84	83	85								
90	64	58	60	64.0	58.0	60.0	64.0	66.0	56.0	64	66	56	64.0	105	81	73	78	72	76	76	79	72	75	75											
91	71	78	64	71.0	78.0	64.0	52.0	68.0	66.0	52	68	66	74.0	136	97	93	88	97	83	72	82	83	89	94											
92	64	70	78	64.0	70.0	78.0	80.0	86.0	84.0	80	86	84	94.0	122	89	81	87	92	98	97	101	103	102	109	106	101	102	85	86	90	99	100	101	100	100
93	96	98	96	96.0	98.0	96.0	100.0	96.0	92.0	100	96	92	100.0	130	116	97	105	109	109	116	112	108	104	112											
94	54	82	84	54.0	82.0	84.0	80.0	82.0	80.0	80	82	80	76.0	114	91	81	70	91	93	92	91	89	85	85											
95	70	86	100	70.0	86.0	100.0	90.0	96.0	90.0	90	96	90	92.0	129	114	106	93	101	116	110	115	109	111	113	108										
96	80	82	76	80.0	82.0	76.0	78.0	80.0	84.0	78	80	84	96.0	134	111	114	102	102	99	99	99	102	107	105	111	108	112	113	101	101	97	97	97	103	108
97	80	96	92	80.0	96.0	92.0	96.0	88.0	90.0	96	88	90	100.0	140	121	96	89	104	106	111	107	110	112	113	117										
98	72	68	66	72.0	68.0	66.0	52.0	58.0	60.0	52	58	60	66.0	123	103	89	85	82	83	71	75	75	79	81	81	83	83	87	82	81	79	71	77	77	81
99	70	64	66	70.0	64.0	66.0	68.0	70.0	70.0	68	70	70	80.0	148	114	103	93	83	81	86	88	89	90	90	93	92	95								
100	64	60	62	64.0	60.0	62.0	60.0	68.0	66.0	60	68	66	62.0	117	91	85	73	77	80	77	83	83	77	77											
101	70	72	70	70.0	72.0	70.0	80.0	86.0	81.0	80	86	81	82.0	124	101	92	87	89	87	95	99	95	97	97	98	100	99								
102	52	54	66	52.0	54.0	66.0	64.0	72.0	74.0	64	72	74	76.0	117	93	79	71	71	79	79	82	88	84	84	87	85	83								
103	68	54	52	68.0	54.0	52.0	60.0	66.0	72.0	60	66	72	76.0	104	86	81	79	66	67	73	78	83	83	88	87	85	88	83	83	75	69	77	83		
104	86	71	88	86.0	71.0	88.0	84.0	88.0	96.0	84	88	96	84.0	141	109	93	100	88	103	99	101	108	101	99	99	103	97								
105	86	80	80	86.0	80.0	80.0	81.0	84.0	76.0	81	84	76	74.0	118	100	97	99	93	95	94	97	88	89	94	91	91	95								
106	66	68	66	66.0	68.0	66.0	62.0	70.0	56.0	62	70	56	58.0	118	83	74	81	82	81	78	84	71	79	69	72	71	69								
107	80	68	74	80.0	68.0	74.0	90.0	86.0	100.0	90	86	100	98.0	152	119	113	100	89	95	105	101	113	109	112	113	116	115	108	103	89	95	104	104	115	115
108	58	56	72	58.0	56.0	72.0	71.0	86.0	73.0	71	86	73	68.0	102	89	83	72	71	81	84	95	85	89	78	84	73	80								
109	86	84	82	86.0	84.0	82.0	81.0	82.0	83.0	81	82	83	90.0	150	109	107	106	103	101	101	102	104	105	106	105	105	106								
110	75	77	78	75.0	77.0	78.0	77.0	75.0	74.0	77	75	74	64.0	102	85	86	88	90	91	90	88	87	83	81											
111	72	71	64	72.0	71.0	64.0	88.0	72.0	88.0	88	72	88	82.0	118	92	81	78	88	83	103	91	104	109	101	99	103	103								
112	66	54	60	66.0	54.0	60.0	74.0	80.0	82.0	74	80	82	86.0	117	95	87	79	71	75	86	91	95	92	95	97	94	91	91	84	73	81	89	95		
113	84	82	80	84.0	82.0	80.0	76.0	74.0	72.0	76	74	72	78.0	118	104	94	91	95	92	91	89	90	91	91											
114	68	66	74	68.0	66.0	74.0	72.0	70.0	84.0	72	70	84	76.0	119	90	83	76	83	89	89	88	96	94	90	88	88	91	83	85	85	89	89	85	93	92
115	70	68	54	70.0	68.0	54.0	62.0	66.0	68.0	62	66	68	66.0	122	94	93	87	85	73	79	83	82	85	81											
116	92	80	74	92.0	80.0	74.0	90.0	100.0	92.0	90	100	92	94.0	147	120	118	109	97	95	107	119	114	121	116	117	111	117	115	115	105	102	115	121	115	115
117	54	66	62	54.0	66.0	62.0	60.0	70.0	72.0	60	70	72	64.0	117	86	81	66	77	76	75	83	85	83	93	83	102	91	87	76	81					

S.no	MAP 105 MIN	MAP 110 MIN	MAP 115MIN	MAP 120 MIN	MAP 125 MIN	MAP 130 MIN	MAP 135 MIN	MAP 140MIN	MAP 145 MIN	MAP 150 MIN	AFTER SHIFTING TO PACU MAP 00 MIN	PACU MAP 30 MIN	PACU MAP 60 MIN	PACU MAP 90 MIN	PACU MAP 120 MIN	PACU MAP 150 MIN	PACU MAP 180 MIN	PACU MAP 210	PACU MAP 240	PACU MAP 270	PACU MAP 300	PACU MAP 330	PACU MAP 360	RR Base line	RR 0	RR 5	RR 10	RR 15	RR 20	RR 25	RR 30	RR 35	RR 40	RR 45	RR 50	RR 55	RR 60	RR 65
61	113	108	115	111							93	90	104	95	90	105	109	103	101	103	104	105	108	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
62	108	109	102	97							101	108	103	105	109	105	111	110	104	105	100	105	107	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
63											93	93	90	95	94	93	91	91	94	89	89	93	95	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
64	77	73	73	73							71	73	86	69	73	88	68	77	72	67	77	72	73	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
65	87	73	77	77							77	80	76	75	78	76	73	79	80	77	77	80	76	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
66	82	95	93	96							91	83	80	97	84	81	96	91	93	92	91	93	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
67	78	73	80	80							81	81	83	79	81	81	84	80	78	82	85	79	69	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
68											92	97	87	94	95	84	84	91	90	84	89	95	95	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
69	75	83	74	79							84	90	76	83	87	75	74	83	84	75	84	82	82	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
70											95	92	87	93	87	86	87	82	81	89	85	84	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
71	86	76	83	88							91	81	81	89	79	81	86	88	79	86	85	79	75	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
72											78	83	73	79	81	77	80	78	77	80	77	75	77	16.0	16.0	14.0	16.0	16.0	18.0	16.0	16.0	16.0	14.0	16.0	16.0	16.0	-
73											111	110	109	117	111	107	107	94	93	104	98	99	106	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
74	87	85	80	98							93	85	81	94	85	85	87	88	91	87	87	91	84	20.0	20.0	20.0	20.0	20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	20.0
75	100	103	105	99	89	93	93	101	99	111	86	95	106	89	94	103	108	98	98	109	97	100	107	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
76											94	99	97	94	99	94	99	84	89	98	87	95	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
77	93	90	89	91							92	95	97	91	91	93	89	88	89	89	93	93	97	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
78	87	83	84	81	77	79	80	73	78	81	78	83	80	77	79	79	85	73	75	83	74	80	84	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
79	87	87	80	83							90	93	85	90	95	85	84	87	89	81	85	87	85	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
80	84	89	84	90							79	86	84	79	87	87	91	93	85	91	90	83	87	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
81											76	74	85	77	76	85	86	78	82	84	81	85	82	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
82											73	76	78	75	77	79	83	75	78	79	77	81	85	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
83	84	89	85	84							85	85	91	86	84	85	85	87	89	87	83	87	93	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
84											81	83	73	79	82	73	79	78	83	79	78	81	81	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
85											110	101	107	112	104	109	107	109	110	101	113	109	111	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
86	83										103	88	86	100	87	85	85	90	86	88	86	82	83	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
87	89										101	92	90	100	91	91	87	95	90	90	93	89	88	18.0	18.0	18.0	18.0	18.0	20.0	20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
88	93										89	89	87	85	92	94	93	90	87	93	91	87	95	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
89											89	83	80	93	84	79	88	83	79	83	83	83	85	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
90											78	73	77	78	75	73	77	77	73	79	79	72	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-
91											84	91	83	89	93	83	75	90	84	72	82	83	89	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-
92	110										86	94	99	87	90	97	98	103	102	97	101	103	110	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
93											112	112	108	111	115	114	114	112	108	116	112	108	110	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-
94											73	90	91	71	91	93	93	91	91	92	91	89	85	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-
95											97	106	115	95	107	117	110	108	109	110	115	109	110	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-
96	110	109	104	105	95	95	96				99	101	96	97	102	97	101	101	104	99	99	102	109	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
97											102	114	112	103	114	114	118	103	106	111	107	110	117	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-
98	81										84	80	81	87	83	82	73	75	79	71	75	75	81	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
99											88	85	86	87	83	81	84	87	84	86	88	89	95	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
100											80	79	80	80	77	78	77	82	83	77	83	83	80	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-
101											88	89	89	87	91	91	99	99	95	95	99	95	97	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
102											69	75	81	71	73	81	77	83	84	79	82	88	88	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
103											79	71	71	84	72	72	79	74	80	73	78	83	87	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
104											100	91	103	102	91	103	102	99	108	99	101	108	100	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
105											99	91	90	98	95	94	97	96	93	94	97	88	86	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-
106											81	79	81	77	79	77	75	84	74	78	84	71	75	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
107	115	113	117	109							97	91	93	100	93	99	110	101	112	105	101	113	109	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
108											76	74	85	77	76	85	86	91	82	84	95	85	82	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
109											105	104	103	106	106	105	105	102	102	101	102	104	109	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
110											88	89	89	86	86	85	86	88	88	90	88	87	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-
111											91	93	87	92	92	87	105	89	99	103	91	104	99	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
112											81	77	80	86	76	79	91	88	90	86	91	95	97	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
113											96	97	95	97	95	95	86	89	87	91	89	90	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-
114	89	89	89	95							87	84	90	83	81	88	85	85	96	89	88	96	91	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
115											85	82	75	83	84	76	82	84	82	79	83	82	83	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
116	114										113	106	105	116	107	99	113	111	107	107	119	114	118	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
117											73	81	78	77	85	83	81	80	83	75	83	85	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

S.no	RR 70	RR 75	RR 80	RR 85	RR 90	RR 95	RR 100	RR 105	RR 110	RR 115	RR 120	RR 125	RR 130	RR 135	RR 140	RR 145	RR 150	PACU RR 00 MIN	PACURR 30 MIN	PACU RR 60	PACU RR 90	PACU RR 120 MIN	PACU RR 150 MIN	PACU RR 180 MIN	PACU RR 210 MIN	PACURR 240MIN	PACU RR 270	PACU RR 300	PACU RR 330 MIN	PACURR 360 MIN	SPO2 Base line	SPO2 00	SPO2 05	SPO2 10	SPO2 15	SPO2 20	SPO2 25	SPO2 30	SPO2 35	SPO2 40	SPO2 45	SPO2 50	SPO2 55	SPO2 60	SPO2 65	SPO2 70	SPO2 75	SPO2 80	SPO2 85	SPO2 90
61	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0	98.0	98.0	98.0	98.0	99.0	99.0
62	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	97.0	97.0	97.0	97.0	97.0	97.0	100.0	100.0	100.0	98.0	97.0	98.0	97.0	99.0	98.0	97.0	97.0	97.0	97.0
63	14.0	14.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	-	-	-	-
64	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98	97	97	97	97	97	97	90	98	96	98	98	98	98	98	98	98	97	97	97
65	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
66	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	99.0	99.0	100.0	98.0	99.0	100.0	99.0	99.0	100.0	99.0	98.0	99.0	99.0	100.0	99.0	99.0	100.0	98.0	99.0
67	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96	98	98	96	99	98	96	98	98	98	98	98	98	98	-	-	-	-	-	-	-
69	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0
70	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	96.0	98.0	98.0	98.0	-	-
71	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	18.0	16.0	16.0	16.0	14.0	16.0	16.0	18.0	16.0	16.0	16.0	14.0	99.0	99.0	99.0	98.0	99.0	99.0	100.0	99.0	99.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
73	20.0	20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	100.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	100.0	98.0	98.0	-	-	-
74	20.0	20.0	20.0	20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	20.0	18.0	18.0	18.0	18.0	18.0	18.0	20.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	98.0	98.0	99.0	99.0	99.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	99.0
75	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
76	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	98.0	99.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0	99.0	98.0	98.0	99.0	98.0	98.0	98.0	99.0
77	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
78	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	100.0	98	98	98	98.0	98.0	98.0	98.0
79	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
80	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
81	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
83	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	99.0	100.0	99.0	98.0	100.0	100.0	100.0	100.0
84	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	100.0	99.0	99.0	99.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	100.0	100.0	100.0	99.0	99.0
85	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	99.0	98.0	98.0	98.0	98.0	99.0	96.0	99.0	98.0	96.0	98.0	98.0	98.0	-	-	-
86	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	97.0	97.0	97.0	98.0	98.0	97.0	98.0	98.0	99.0	98.0	98.0	99.0	98.0	96.0	97.0	98.0	97.0	98.0	98.0	97.0
87	18.0	18.0	18.0	18.0	20.0	20.0	18.0	18.0	-	-	-	-	-	-	-	-	-	18.0	20.0	20.0	18.0	18.0	18.0	18.0	18.0	20.0	20.0	18.0	18.0	18.0	98.0	100.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0	99.0	99.0	99.0	99.0	100.0	98.0	98.0	100.0	100.0	100.0	100.0
88	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	98.0	98.0	98.0	98.0	98.0	99.0	100.0	99.0	100.0	99.0	99.0	99.0	98.0	100.0	99.0	100.0	98.0	98.0	98.0
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	99.0	99.0	99.0	98.0	99.0	99.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-
91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-
92	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	96.0	96.0	99.0	98.0	96.0	98.0	99.0	98.0	96.0	99.0	-	-	-	-	-	-	-	-	-
94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	-	-	-	-	-	-	-	-	-
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	98.0	98.0	98.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-	-	-
96	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.0	18.0	18.0	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-	-	-
98	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	-	-
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-	-
103	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	98.0	98.0	99.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	99.0	-	-	-	-	-	-	-
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-
106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	97.0	97.0	96.0	96.0	97.0	97.0	97.0	97.0	96.0	96.0	96.0	98.0	97.0	-	-	-	-	-	-	-
107	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	95.0	98.0	98.0	98.0	99.0	98.0	99.0	98.0	100.0	98.0	96.0	98.0	95.0	96.0	97.0	98.0	98.0	98.0	98.0	99.0
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-
109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	-	-	-	-	-	-	-	-	-	-	-
111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	100.0	100.0	98.0	99.0	100.0	100.0	100.0	99.0	98.0	98.0	98.0	99.0	100.0	-	-	-	-	-	-	-
112	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	100.0	100.0	99.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	98.0	99.0	100.0	100.0	99.0
113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	97.0	97.0	97.0	98.0	96.0	97.0	96.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-
114	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0
115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	98.0	96.0	98.0	96.0	98.0	98.0	99.0	98.0	-	-	-	-	-	-	-	-	-
116	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	96.0	96.0	98.0	98.0	96.0	98.0	98.0	99.0	98.0	99.0	98.0	96.0	98.0	96.0	98.0	98.0	96.0	98.0	96.0
117	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	100.0	100.0	99.0	100.0	100.0	99.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-

S.no	SPO2 95	SPO2 100	SPO2 105	SPO2 110	SPO2 115	SPO2 120	SPO2 125	SPO2 130	SPO2 135	SPO2 140	SPO2 145	SPO2 150	AFTER SHIFTING TO PACU SPO2 00	PACU SPO2 30	PACU SPO2 60	PACU SPO2 90	PACU SPO2 120	PACU SPO2 150	PACU SPO2 180	PACU SPO2 210	PACU SPO2 240	PACU SPO2 270	PACU SPO2 300	PACU SPO2 330	PACU SPO2 360	TEMPERATURE FOREHEAD Base line	TEMPERATURE forehead 0 MIN	TemP forehead 30 MIN	TemP forehead 60 MIN	TemP forehead 90 MIN	TemP forehead 120 MIN	TemP forehead 150 MIN	TemP forehead 180 MIN	TemP forehead 210	TemP forehead 240	TemP forehead 270	TemP forehead 300
61	99.0	99.0	99.0	100.0	100.0	100.0	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	100.0	100.0	99.0	99.0	99.0	99.0	100.0	100.0	96.5	97.0	97.4	97.1	96.9	96.4	96.8	97.1	96.6	96.4	95.9	95.9
62	97.0	100.0	100.0	100.0	98.0	97.0	-	-	-	-	-	-	97.0	97.0	97.0	100.0	100.0	100.0	98.0	97.0	97.0	100.0	100.0	100.0	98.0	97.4	97.9	96.8	97.3	98.0	96.4	95.8	97.3	97.4	98.1	98.2	98.0
63	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	97.6	97.5	97.4	97.5	96.9	96.8	96.8	96.5	96.4	96.5	96.4	96.6
64	97	90	98	96	98	98	-	-	-	-	-	-	97	97	97	90	98	96	98	97	97	90	98	96	98	97.4	96.8	97.6	96.5	97.2	97.5	97.3	96.1	96.0	97.0	96.9	96.8
65	100.0	100.0	100.0	98.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	98.0	100.0	100.0	100.0	100.0	100.0	98.0	100.0	97.1	96.8	96.2	97.3	97.8	98.0	97.8	97.8	97.6	97.7	97.6	97.4
66	100.0	99.0	99.0	100.0	99.0	98.0	-	-	-	-	-	-	98.0	99.0	100.0	99.0	99.0	100.0	99.0	99.0	100.0	99.0	99.0	100.0	99.0	98.1	98.4	97.9	97.4	98.1	97.5	97.4	97.4	98.6	97.8	97.6	97.0
67	100.0	100.0	100.0	100.0	99.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	97.7	97.3	97.0	96.8	97.1	96.7	96.6	96.5	96.4	96.0	96.2	96.3
68	-	-	-	-	-	-	-	-	-	-	-	-	99	98	96	98	98	98	98	98	96	98	98	98	98	97.6	98.8	98.2	97.7	98.1	98.4	97.8	97.6	96.8	96.8	96.4	97.8
69	99.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	97.6	97.8	97.8	96.9	97.2	97.4	97.7	97.5	97.8	96.8	96.9	96.9
70	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.6	97.7	98.1	97.8	97.5	97.1	96.9	96.8	96.7	96.8	96.9	96.6
71	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.4	97.5	97.4	96.9	96.8	96.8	96.8	96.5	97.5	97.2	97.0	97.3
72	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	100.0	99.0	99.0	100.0	100.0	99.0	100.0	99.0	99.0	100.0	100.0	97.4	97.5	96.4	96.9	96.8	96.9	96.4	95.6	95.2	96.0	95.9	94.8
73	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.1	98.0	97.5	97.5	97.9	97.4	97.0	96.9	96.6	96.8	96.7	97.1
74	99.0	99.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	99.0	99.0	99.0	98.0	98.0	98.0	99.0	99.0	99.0	98.0	98.0	98.0	97.4	96.8	97.2	97.0	97.0	97.1	97.4	96.9	97.0	96.9	96.8	96.8
75	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.2	98.4	97.9	97.7	97.8	97.4	96.9	97.2	96.5	96.0	96.5	96.4
76	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	100.0	96.5	97.4	97.8	97.6	96.8	96.4	96.3	96.6	97.1	97.3	97.4	97.4
77	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.4	96.9	97.5	97.1	97.1	97.0	96.4	96.5	97.0	96.8	96.6	96.1
78	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98	98	98	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.5	97.2	97.1	97.2	97.0	96.9	96.5	96.8	96.9	96.9	96.4	97.0
79	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.6	97.5	97.4	97.5	96.9	96.8	96.5	96.4	96.5	96.4	96.6	96.6
80	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.4	97.6	97.9	98.0	97.7	97.5	97.4	97.4	96.9	96.8	97.0	97.2
81	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.8	96.9	97.0	97.0	97.1	96.8	96.5	95.6	95.4	96.6	95.2	95.2
82	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	96.5	96.8	96.9	96.9	97.4	97.0	96.6	96.4	96.1	95.9	95.6
83	100.0	100.0	99.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	96.9	96.9	97.4	97.1	96.9	96.9	97.0	97.5	97.0	96.4	96.5	96.4
84	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	98.0	97.2	97.0	97.1	96.8	96.8	96.6	96.9	96.8	96.4	96.2	96.1	96.7
85	-	-	-	-	-	-	-	-	-	-	-	-	99.0	98.0	98.0	98.0	98.0	99.0	96.0	98.0	98.0	98.0	98.0	99.0	96.0	97.4	97.1	96.9	96.0	97.2	96.8	96.8	96.6	96.8	96.9	97.1	97.2
86	98.0	98.0	99.0	-	-	-	-	-	-	-	-	-	98.0	97.0	98.0	98.0	99.0	98.0	98.0	97.0	98.0	98.0	99.0	98.0	98.0	96.2	96.1	95.8	96.9	96.3	96.4	96.3	96.5	96.8	96.7	96.9	96.9
87	99.0	99.0	100.0	-	-	-	-	-	-	-	-	-	100.0	100.0	99.0	99.0	100.0	99.0	99.0	100.0	99.0	99.0	100.0	99.0	99.0	97.9	97.5	97.7	97.2	97.5	98.2	97.5	97.9	98.1	97.9	97.9	98.2
88	99.0	100.0	99.0	-	-	-	-	-	-	-	-	-	98.0	98.0	99.0	100.0	99.0	100.0	99.0	98.0	99.0	100.0	99.0	100.0	99.0	97.7	97.5	97.0	96.8	97.2	98.6	98.2	98.8	97.8	97.6	97.2	96.8
89	-	-	-	-	-	-	-	-	-	-	-	-	99.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	96.8	96.6	97.0	96.6	96.8	96.5	96.7	96.7	96.6	97.4	96.8	96.4
90	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	100.0	96.8	96.9	96.9	97.0	97.1	97.0	96.9	96.7	96.6	96.4	96.1	95.9
91	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	98.0	97.5	97.6	97.6	97.5	96.9	96.8	96.7	96.4	96.1	95.6
92	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	96.5	96.8	96.5	96.6	96.6	96.5	96.1	95.8	95.7	96.0	96.2
93	-	-	-	-	-	-	-	-	-	-	-	-	98.0	96.0	98.0	99.0	98.0	96.0	99.0	96.0	98.0	99.0	98.0	96.0	99.0	96.5	97.0	97.4	97.1	96.9	96.4	96.8	97.1	96.6	96.4	95.9	96.1
94	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	96.8	96.9	97.0	97.1	96.8	96.5	96.6	95.6	95.4	96.6	95.2	95.4
95	-	-	-	-	-	-	-	-	-	-	-	-	99.0	98.0	99.0	99.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	98.9	98.8	98.6	97.6	96.9	96.8	96.4	96.6	96.8	96.1	96.9	97.4
96	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.8	97.1	97.4	97.9	97.1	96.9	96.8	96.9	96.5	96.4	96.2	95.9
97	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	99.0	99.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	97.4	97.8	96.9	97.5	97.4	96.8	97.0	97.1	96.9	96.5	96.2	96.0
98	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	96.9	97.5	97.1	97.0	96.4	91.5	97.0	96.8	96.8	96.6	96.1
99	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.2	97.0	96.9	97.1	97.1	97.0	96.8	96.6	96.8	96.4	95.4	96.1
100	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.2	97.0	97.1	96.9	96.5	96.8	97.0	96.6	96.4	96.1	95.9	95.6
101	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.4	97.8	97.5	96.8	96.9	97.0	97.1	97.1	96.1	96.5	96.5	96.1
102	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	96.2	95.9	95.8	96.1	96.8	97.0	97.1	97.0	96.9	96.8	96.7
103	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.9	96.9	97.0	97.1	97.1	96.8	96.6	96.6	95.9	96.8	96.6	96.4
104	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	100.0	100.0	100.0	99.0	100.0	99.0	100.0	100.0	100.0	99.0	100.0	97.4	97.3	97.1	96.9	96.8	97.3	97.2	96.6	96.4	96.8	96.8	96.6
105	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.2	97.4	96.9	97.5	97.1	97.1	97.0	96.4	96.5	97.0	96.8	96.6
106	-	-	-	-	-	-	-	-	-	-	-	-	96.0	97.0	97.0	97.0	97.0	96.0	96.0	97.0	97.0	97.0	97.0	96.0	96.0	96.5	98.6	97.6	97.6	97.8	97.7	97.8	97.5	96.8	97.4	96.6	97.1
107	99.0	99.0	100.0	98.0	98.0	98.0	-	-	-	-	-	-	99.0	98.0	99.0	98.0	100.0	98.0	96.0	98.0	99.0	98.0	100.0	98.0	96.0	96.5	96.0	94.6	95.0	95.5	95.9	96.2	96.5	96.8	96.9	97.0	97.0
108	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.8	96.9	97.0	97.0	97.1	96.8	96.5	95.6	95.4	96.6	95.2	95.4
109	-	-	-	-	-	-	-	-	-	-	-	-	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	97.1	97.4	97.5	97.7	97.9	97.6	97.2	96.9	96.8	96.5	96.7	96.8
110	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	97.1	97.0	96.9	96.7	96.5	96.2	96.4	96.5	96.8	96.9	97.0	97.1
111	-	-	-	-	-	-	-	-	-	-	-	-	99.0	100.0	100.0	100.0	99.0	98.0	98.0	100.0	100.0	100.0	99.0	98.0	98.0	98.2	97.4	96.0	96.2	96.5	97.0	97.8	96.9	97.2	96.5	96.0	96.5
112	-	-	-	-	-	-	-	-	-	-	-	-	100.0	99.0	100.0	99.0	100.0	100.0	100.0	99.0	100.0	99.0	100.0	100.0	100.0	97.9	97.4	97.8	97.4	96.9	97.2	96.5	96.9	96.8	96.5	96.0	96.5
113	-	-	-	-	-	-	-	-	-	-	-	-	96.0	97.0	96.0	98.0	98.0	98.0	98.0	97.0	96.0	98.0	98.0	98.0	98.0	96.5	96.4	96.1	96.0	97.2	97.0	96.8	97.1	97.0	96.9	96.5	97.0
114	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.8	96.9	97.6	97.7	97.8	97.5	96.8	97.4	96.6	97.1	97.4	97.6
115	-	-	-	-	-	-	-	-	-	-	-	-	96.0	98.0	96.0	98.0	98.0	99.0	98.0	98.0	96.0	98.0	98.0	99.0	98.0	97.4	98.0	97.5	97.5	97.4	97.5	96.9	96.8	96.7	96.6	96.4	96.1
116	98.0	98.0	99.0	-	-	-	-	-	-	-	-	-	98.0	96.0	98.0	98.0	99.0	98.0	99.0	96.0	98.0	98.0	99.0	98.0	99.0	98.0	98.2	98.4	97.9	97.9	98.0	97.8	97.4	96.9	97.2	96.5	96.0
117	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	99.0	100.0	100.0	99.0	99.0	100.0	99.0	100.0	100.0	99.0	99.0	97.6	98.0	97.5	97.6	97.5	97.6	96.9	96.8	96.7	96.4	96.7	96.4

S.no	TemP forehead 330	TemP forehead 360	Temp tympanic memb Base line	Temp tympanic memb 0	Temp tympanic memb 30	Temp tympanic memb 60	Temp tympanic memb 90	Temp tympanic memb 120	Temp tympanic memb 150	Temp tympanic memb 180	Temp tympanic memb 210	Temp tympanic memb 240	Temp tympanic memb 270	Temp tympanic memb 300	Temp tympanic memb 330	Temp tympanic memb 360	Rescue drug Tramadol	Onset of shivering	Cessation of shivering	Bradycardia	Hypotension	Nausea vomiting	Dizziness/ sedation	Shivering	Grading of shivering as per Wrench Grade 0	Wrench Grade 1	Wrench Grade 2	Wrench Grade 3	Wrench Grade 4	MOSS/A SCORE 6	MOSS/A SCORE 5	MOSS/A SCORE 4	MOSS/A GRADE 3	MOSS/A GRADE 2	MOSS/A GRADE 1	MOSS/A SCORE 0
61	96.9	96.4	99.2	97.9	98.1	97.9	97.4	97.6	97.2	97.0	97.4	97.8	97.1	96.4	97.2	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
62	98.1	98.0	96.6	97.4	96.1	95.5	96.6	96.8	95.3	97.2	97.4	97.8	97.6	97.8	97.9	96.4	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
63	96.8	96.9	98.5	98.1	97.9	97.9	97.8	97.4	97.2	97.0	96.8	96.4	96.1	96.1	96.5	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
64	96.5	97.2	94.6	94.4	98.1	97.7	97.5	97.8	96.8	97.0	95.2	95.0	95.5	95.8	96.9	97.4	-	20.0	5.0	-	P	-	-	P	-	P	-	-	-	P	-	-	-	-	-
65	97.5	97.4	97.5	96.2	95.8	95.0	95.7	95.9	96.4	96.9	97.0	97.2	97.5	97.8	97.6	97.4	-	45.0	5.0	-	-	-	-	P	-	-	P	-	-	P	-	-	-	-	-
66	96.2	96.0	99.0	98.5	100.4	97.6	96.8	97.5	97.8	98.0	97.4	97.8	97.2	96.6	98.8	97.8	-	-	-	-	-	-	P	-	-	-	-	-	-	P	-	-	-	-	-
67	95.9	95.8	93.9	95.8	93.5	93.4	93.0	91.2	91.6	92.8	93.5	94.6	95.6	96.0	96.8	97.0	50.0	20.0	4.0	-	-	-	-	P	-	-	-	P	-	P	-	-	-	-	-
68	97.9	98.0	95.2	97.9	98.2	97.5	97.0	96.8	96.0	95.8	96.6	95.8	96.6	96.9	97.0	97.2	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
69	96.8	97.0	96.9	96.7	97.0	97.7	97.0	97.2	96.4	96.2	96.0	96.4	96.2	96.8	97.0	97.2	50.0	32.0	7.0	-	-	-	-	P	-	-	-	-	P	-	-	P	-	-	-
70	97.0	97.1	99.0	99.1	98.9	98.7	98.4	97.9	97.3	97.4	97.8	97.4	97.4	97.2	97.1	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
71	97.4	98.2	98.1	98.4	98.4	98.0	97.9	98.1	98.2	97.8	98.0	97.9	97.9	97.8	97.7	98.0	-	-	-	-	-	P	-	-	-	-	-	-	-	P	-	-	-	-	-
72	95.2	95.4	96.6	96.9	96.0	96.8	96.2	96.2	95.8	95.9	96.2	96.5	96.7	97.0	96.8	97.1	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
73	97.4	96.8	99.0	98.9	98.8	98.4	98.4	98.1	97.7	97.5	97.4	97.6	97.8	97.7	97.8	97.7	-	10.0	5.0	-	-	-	-	P	-	-	P	-	-	P	-	-	-	-	-
74	97.0	96.9	97.9	97.9	98.0	98.1	98.0	97.9	97.5	97.6	97.5	97.7	97.5	97.5	97.7	97.9	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
75	96.2	96.8	98.5	98.1	98.6	98.4	97.8	97.9	97.4	97.2	97.4	97.8	97.6	95.9	95.5	96.6	50.0	30.0	6.0	-	-	-	-	P	-	-	-	P	-	P	-	-	-	-	-
76	97.2	97.6	98.4	97.8	97.4	98.1	97.2	97.1	96.9	96.8	97.8	97.4	97.6	97.1	96.8	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
77	96.6	96.9	98.1	98.0	98.4	98.4	98.2	98.2	97.9	97.4	97.9	97.8	97.8	97.4	97.6	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
78	96.9	97.5	98.1	97.6	97.9	97.8	98.0	97.8	97.6	97.7	97.1	98.0	98.0	97.9	97.4	97.6	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
79	96.8	96.9	98.5	98.1	97.9	97.9	97.8	97.4	97.2	97.0	96.8	96.4	96.1	96.5	96.9	97.2	-	40.0	4.0	-	-	-	-	P	-	-	P	-	-	P	-	-	-	-	-
80	97.1	97.0	98.6	98.5	98.6	98.4	98.3	98.5	98.6	98.4	98.0	98.1	97.8	98.0	98.0	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
81	95.4	95.1	97.9	97.8	98.2	98.1	97.4	97.8	97.6	97.1	96.2	96.1	96.3	96.1	96.0	96.0	-	20.0	10.0	-	P	P	-	P	-	P	-	-	-	P	-	-	-	-	-
82	95.9	96.4	98.1	98.0	97.9	97.6	97.1	97.4	97.8	97.6	97.1	96.6	96.1	95.9	96.1	96.2	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
83	96.6	96.8	97.6	97.1	98.1	97.9	97.4	97.8	97.8	97.9	97.1	96.6	96.1	97.2	97.2	97.4	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
84	96.8	97.4	97.9	97.9	98.0	98.0	97.4	97.0	96.8	97.4	97.4	97.0	97.1	96.9	97.0	97.2	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
85	97.8	97.6	97.5	97.2	96.8	96.4	96.2	96.0	96.5	96.8	96.9	97.1	97.9	97.8	97.2	97.5	50.0	20.0	10.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-
86	97.0	97.4	97.6	97.8	97.4	97.4	96.2	96.4	96.0	96.0	96.9	97.6	97.4	97.4	97.5	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
87	98.1	97.9	97.8	97.9	98.3	97.8	97.9	98.5	98.1	97.7	96.8	96.8	95.8	96.0	96.0	95.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
88	96.4	96.2	97.9	97.8	97.9	97.8	97.7	97.8	97.9	97.5	97.4	97.5	97.6	97.7	97.5	97.6	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
89	95.9	95.6	97.9	97.6	97.9	97.8	97.4	97.6	97.4	95.4	93.9	93.1	93.0	97.1	96.4	96.2	50.0	40.0	10.0	-	-	-	-	P	-	-	-	P	-	P	-	-	-	-	-
90	95.8	95.6	98.2	98.0	98.0	98.0	97.8	97.6	97.7	97.8	97.0	96.0	96.2	97.4	97.5	97.2	-	-	-	-	P	P	-	-	-	-	-	-	-	P	-	-	-	-	-
91	95.1	95.0	98.1	98.0	98.4	98.2	98.2	98.4	98.0	97.4	97.0	96.8	96.9	96.1	95.8	95.9	50.0	15.0	5.0	-	-	-	-	P	-	-	-	P	-	-	p	-	-	-	-
92	96.2	95.8	97.8	97.7	97.7	97.4	97.2	96.8	97.0	95.0	93.5	92.7	92.6	96.6	96.8	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
93	96.6	96.9	99.2	97.9	98.1	97.9	97.4	97.6	97.2	97.9	97.4	97.8	97.1	96.4	97.2	97.1	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
94	95.1	95.6	98.1	97.9	98.0	98.2	97.4	97.8	97.6	97.1	97.2	96.8	96.6	96.1	96.0	96.3	-	15.0	6.0	-	-	-	-	P	-	-	P	-	-	-	P	-	-	-	-
95	97.2	97.0	97.8	97.7	97.1	99.4	97.4	96.6	95.2	95.5	98.0	94.9	95.1	96.6	96.2	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
96	96.4	96.6	98.1	98.0	98.2	98.2	98.0	97.9	97.4	97.5	97.8	97.5	97.2	96.1	96.6	96.9	-	30.0	6.0	-	-	-	-	P	-	P	-	-	-	P	-	-	-	-	-
97	96.4	96.0	98.2	98.5	98.0	98.1	97.9	97.6	97.8	97.6	97.5	97.7	97.5	96.4	96.1	95.9	50.0	40.0	7.0	-	P	P	-	P	-	-	-	P	-	-	P	-	-	-	-
98	96.6	97.4	98.3	98.0	98.1	98.0	97.9	97.8	97.2	97.8	97.4	97.6	97.4	97.0	97.4	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
99	96.2	96.2	98.0	98.0	97.2	97.8	97.6	97.9	97.7	97.4	97.2	97.0	97.0	97.1	96.9	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
100	95.9	96.4	98.1	98.0	97.9	97.6	97.1	97.1	97.2	97.4	97.8	96.6	96.1	95.9	96.2	96.4	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
101	96.1	97.0	98.9	98.6	98.4	98.2	97.1	98.1	98.1	97.8	97.4	97.3	97.2	97.6	97.2	97.5	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
102	96.8	96.8	97.6	98.5	98.1	97.9	98.1	98.0	97.8	97.7	97.4	97.4	97.9	97.4	97.2	97.0	-	25.0	10.0	-	P	P	-	P	-	-	P	-	-	P	-	-	-	-	-
103	96.2	96.2	98.1	98.9	98.6	97.9	97.9	97.6	97.4	97.0	96.8	96.9	97.2	97.0	96.9	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
104	96.9	96.4	98.1	98.0	97.9	96.8	97.4	97.8	97.9	97.2	97.1	96.8	96.9	97.2	97.1	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
105	96.1	96.6	98.0	98.1	97.8	98.0	98.2	97.9	97.4	97.8	97.4	97.9	97.9	97.1	97.1	97.4	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
106	97.4	97.6	99.6	98.4	98.4	99.2	98.2	94.3	98.4	98.1	97.0	97.8	97.2	97.4	98.1	97.9	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
107	97.6	98.0	98.3	97.9	97.1	96.6	96.9	97.2	97.4	96.9	96.8	96.8	96.9	97.1	97.9	97.8	50.0	10.0	5.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
108	95.1	95.6	97.9	97.8	98.2	98.1	97.4	97.8	97.6	97.6	97.1	96.2	96.1	96.0	96.0	96.3	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
109	96.8	96.9	98.0	98.3	98.4	98.6	98.8	98.9	97.5	97.4	97.2	97.0	97.5	97.6	97.6	97.7	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
110	97.2	97.2	98.0	98.1	98.2	98.3	98.4	98.5	98.6	98.8	98.9	98.5	98.0	97.9	97.7	97.5	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
111	96.4	96.2	97.4	96.8	96.0	96.5	97.0	97.3	97.4	97.8	97.0	96.0	96.2	95.9	95.5	96.6	50.0	22.0	5.0	-	P	-	-	P	-	-	-	P	-	-	P	-	-	-	-
112	96.4	96.2	98.5	98.1	98.6	98.4	97.8	97.9	97.4	97.2	97.4	97.8	97.6	95.9	95.5	96.6	50.0	30.0	7.0	-	-	-	-	P	-	-	P	-	-	P	-	-	-	-	-
113	96.8	96.4	96.2	95.1	94.4	94.8	94.6	95.2	94.4	95.1	95.2	94.5	94.2	95.2	94.4	94.6	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
114	98.0	98.4	97.8	98.4	98.4	98.8	99.2	98.2	98.3	98.4	98.1	97.0	97.8	97.2	97.4	98.1	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
115	95.6	95.1	98.1	98.0	98.4	98.2	98.2	98.4	98.2	98.0	97.4	97.0	96.8	96.9	96.1	96.4	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
116	96.4	96.2	98.5	98.1	98.6	98.4	97.8	97.9	97.4	97.8	97.0	96.0	96.2	95.9	95.5	96.6	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
117	96.1	96.4	98.1	98.0	98.4	98.2	98.4	98.0	97.4	97.6	97.4	97.2	97.2	97.1	97.0	96.6	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-

S.no	Name	MRD	Age	Sex	HEIGHT (Cms)	WEIGHT	BMI	diagnosis	proposed surgery	ASA	GROUP	anesthesia start : date / time	highest dermatomal level	duration of surgery (minutes)	Duration of Spinal Anaesthesia (minutes)	Operating room temperature (°C)	HR (Base line)	HR 0	HR 5	HR 10	HR 15	HR 20	HR 25	HR 30	HR 35	HR 40	HR 45	HR 50	HR 55	HR 60	HR 65	HR 70	HR 75	HR 80	HR 85	HR 90	HR 95	HR 100	HR 105	HR 110	HR 115	HR 120	HR 125	HR 130
118	BS	1371314	29	M	173	90	30.1	FUCO DFN RIGHT SIDE WITH KNEE STIFFNESS	IMPLANT REMOVAL + ANTIBIOTIC BEAD PLACEMENT	1	B	02-09-2022 02:00	T8	45	170	21	92.0	90.0	94	95	96	92	94	96	94	92	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119	S	1371314	48	F	170	60	20.8	CLOSED FRACTURE PROXIMAL TIBIA LEFT	ORIF	2	C	02-09-2022 10:45	T8	75	180	22	114.0	110.0	110	112	110	106	108	110	108	106	108	110	108	106	102	106	106	-	-	-	-	-	-	-	-	-	-	-	-	-
120	PS	1355647	18	M	176	76	24.5	POCO ACROSS KNEE EX-FIX RIGHT SIDE	FEMUR NAILING	2	B	02-09-2022 09:00	T8	75	160	22	88.0	94.0	90	90	92	93	94	97	98	99	98	97	98	96	94	96	96	-	-	-	-	-	-	-	-	-	-	-	-	-
121	MS	1371416	45	M	178	90	28.4	FRACTURE FEMUR LEFT SIDE	ORIF DISTAL FEMUR	2	C	02-09-2022 12:00	T6	105	170	22	98.0	106.0	102	100	98	98	92	96	92	96	98	94	90	92	94	92	92	90	96	94	92	96	98	-	-	-	-	-	-	-
122	SP	1372342	22	M	172	76	25.7	SUBTROCHANTERIC FRACTURE LEFT SIDE	CRIF	1	B	03-09-2022 11:00	T6	105	180	21	94.0	94.0	90	89	87	85	82	80	84	87	89	90	91	93	95	93	93	91	80	95	84	87	89	-	-	-	-	-	-	-
123	MS	1371891	60	M	169	90	31.5	FUCO RIGHT PROXIMAL TIBIA NAILING	IMPLANT REMOVAL	2	C	03-09-2022 04:30	T8	75	180	22	98.0	99.0	90	92	86	86	88	84	88	86	84	82	80	82	80	82	82	-	-	-	-	-	-	-	-	-	-	-	-	-
124	SS	1362400	60	M	163	70	26.3	POCO FOREFOOT AMPUTATION	WOUND CLOSURE	3	B	03-09-2022 02:00	T10	45	160	22	90.0	94.0	92	91	95	96	98	99	100	101	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
125	DD	1361523	52	F	160	60	23.4	POCO PROXIMAL TIBIA EX-FIX	DEBRIDEMENT AND ANTIBIOTIC BEAD REPLACEMENT	3	A	03-09-2022 04:00	T10	45	170	21	98.0	78.0	76	74	80	72	70	66	68	68	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126	GS	1363428	56	M	178	65	20.5	POCO PROXIMAL TIBIA EX-FIX	DEBRIDEMENT AND ANTIBIOTIC BEAD REPLACEMENT	3	A	03-09-2022 03:30	T8	45	190	22	90.0	99.0	98	102	101	106	105	102	100	98	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
127	ND	1372923	55	F	154	90	37.9	FRACTURE NECK OF FEMUR LEFT	HEMIARTHROPLASTY LEFT	3	A	05-09-2022 11:00	T6	90	180	22	98.0	102.0	100	102	100	99	98	99	102	100	102	99	98	99	96	99	99	98	99	96	-	-	-	-	-	-	-	-	-	-
128	RS	1149233	19	M	183	74	22.1	WOUND 2ND WEB SPACE RIGHT FOOT	DEBRIDEMENT AND WOUND WASH	2	C	05-09-2022 15:30	T10	45	170	22	94.0	96.0	94	96	92	92	96	88	90	86	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
129	KS	1359753	30	M	178	95	30.0	POCO DISTAL FEMUR	DEBRIDEMENT AND VAC APPLICATION	2	C	05-09-2022 04:00	T8	45	180	21	86.0	90.0	86	88	86	82	84	86	84	82	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130	BS	1354757	47	M	170	75	26.0	GANGRENE OF LEFT FOOT TOES	DEBRIDEMENT	3	A	06-09-2022 15:00	T10	45	170	23	62.0	70.0	62	66	64	62	64	66	60	62	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
131	H	1360565	35	M	176	70	22.6	POCO TIBIA WITH EX-FIX	ORIF TIBIA RIGHT	2	C	06/09/22 02:00PM	T8	105	180	21	82.0	84.0	82	80	78	78	80	82	80	78	76	74	76	76	78	76	76	76	82	78	80	78	76	-	-	-	-	-	-	-
132	SS	1373627	38	M	174	83	27.4	SECONDARY DEGENERATION OF HIP	LEFT HIP THR	2	B	06/09/22 09:00AM	T8	75	190	22	76.0	86.0	80	82	80	78	74	76	74	78	80	82	80	78	76	78	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
133	MK	1346773	37	F	168	60	21.3	POCO HEMIARTHROPLASTY	REVISION THR	2	C	07/09/22 09:00AM	T6	135	180	23	110.0	104.0	102	106	92	90	92	90	88	82	84	82	84	80	82	80	80	84	90	82	88	82	84	82	84	80	82	82
134	GK	1373523	60	F	164	65	24.2	FRACTURE NECK OF FEMUR	PFN	3	B	08/09/22 10:30AM	T6	120	200	22	64.0	70.0	66	70	72	70	68	66	64	66	68	66	64	64	62	64	64	64	66	62	64	66	68	66	64	64	-	-
135	DK	1361523	60	F	154	76	32.0	POCO TIBIA EX-FIX	VAC APPLICATION	3	C	08/09/22 03:00PM	T10	60	180	22	76.0	82.0	80	82	80	78	78	76	74	76	78	80	80	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
136	NS	1367572	56	M	173	80	26.7	POCO EXFIX LEFT TIBIA	AMPUTATION	3	A	08/09/22 03:00PM	T10	90	180	21	114.0	114.0	112	116	110	112	108	106	102	102	106	104	101	100	102	100	100	101	106	102	-	-	-	-	-	-	-	-	-	-
137	HS	1375271	24	M	169	72	25.2	POCO RIGHT FEMUR NAILING	implant removal	2	C	08/09/22 04:00PM	T8	60	200	22	110.0	113.0	112	110	112	109	110	106	104	107	106	102	104	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
138	MS	1366904	27	M	173	85	28.4	FRACTURE PROXIMAL RIGHT TIBIA	ORIF TIBIA RIGHT	2	B	09-09-2022 10:00	T8	120	210	22	104.0	103.0	100	102	104	102	100	98	96	99	96	98	99	100	98	100	100	99	98	98	96	99	96	98	99	100	-	-
139	SP	1376016	31	M	178	80	25.2	COMPLETE ACL TEAR	ARTHROSCOPIC ACL RECONSTRUCTION	1	A	09-09-2022 12:00	T8	120	180	23	98.0	99.0	96	98	98	99	96	96	99	98	98	92	96	99	98	99	99	96	96	98	99	98	98	92	96	99	-	-
140	HS	1376690	42	M	167	80	28.7	FUCO NON UNION FRACTURE LEFT MIDSHAFT	DISTAL FEMUR PLATING	2	A	10-09-2022 13:00	T6	120	210	22	82.0	84.0	80	82	80	76	74	73	76	74	70	72	74	70	72	70	70	74	73	72	76	74	70	72	74	70	-	-
141	RK	1377369	54	F	159	74	29.3	CLOSED FRACTURE INTERTROCHANTERIC FEMUR	PROXIMAL FEMUR NAILING	2	B	12-09-2022 10:00	T8	90	200	22	86.0	91.0	90	92	90	90	92	90	92	92	88	86	88	88	86	88	88	88	90	86	-	-	-	-	-	-	-	-	-	-
142	NB	1377639	36	M	164	70	26.0	FRACTURE PATELLA LEFT SIDE	TENSION BAND WIRING	1	B	13-09-2022 11:30	T10	60	210	21	86.0	84.0	85	82	84	86	82	80	84	86	84	82	80	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
143	SC	1378853	51	M	172	65	22.0	TENDO-ACHILLES TEAR LEFT SIDE	TA REPAIR LEFT SIDE	2	A	14-09-2022 10:00	T10	120	190	22	96.0	99.0	104	100	98	96	92	94	94	92	94	92	96	94	92	94	94	96	94	92	94	92	94	92	96	94	-	-
144	JS	1374412	24	M	167	70	25.1	ACL TEAR LEFT	ACL RECONSTRUCTION	1	B	14-09-2022 09:30	T10	120	180	22	96.0	99.0	100	102	100	100	98	96	92	92	94	92	96	96	94	96	96	96	96	94	92	92	94	92	96	96	-	-
145	LS	1380055	27	M	176	62	20.0	POCO FRACTURE FEMUR AND TIBIA	DEBRIDEMENT AND VAC APPLICATION	2	A	15-09-2022 03:00	T10	60	200	21	88.0	89.0	88	84	82	90	88	86	88	84	82	84	82	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
146	HS	1378429	25	M	174	65	21.5	MIDSHAFT FEMUR LEFT SIDE	CRIF FEMUR LEFT SIDE	2	A	15-09-2022 12:00	T8	90	190	22	96.0	90.0	92	88	86	88	84	86	88	82	84	82	86	95	94	95	95	86	86	86	-	-	-	-	-	-	-	-	-	-
147	HK	1360565	35	M	168	70	24.8	POCO ORIF PROXIMAL TIBIA RIGHT SIDE	DEBRIDEMENT AND IRRIGATION	2	A	19-09-2022 16:00	T10	60	170	23	86.0	88.0	82	86	84	82	86	84	82	82	86	84	82	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
148	AM	1330232	28	M	170	70	24.2	EQUINUS DEFORMITY RIGHT SIDE	DEFORMITY CORRECTION AND TA LENGTHENING RIGHT SIDE	2	C	19-09-2022 10:00	T8	90	170	22	116.0	108.0	110	110	112	114	116	112	110	106	108	110	108	110	110	110	110	108	112	110	-	-	-	-	-	-	-	-	-	-
149	SS	977783	57	M	177	78	24.9	CLOSED FRACTURE LATERAL MALLEOLUS LEFT SIDE	ORIF	3	A	19-09-2022 01:00	T10	90	180	21	78.0	84.0	82	80	82	78	76	74	76	80	82	78	76	78	76	78	78	76	74	75	-	-	-	-	-	-	-	-	-	-
150	AS	1338728	21	M	174	76	25.1	FUCO FRACTURE BB LEG RIGHT WITH EXTERNAL FIXATOR IN SITU	SPLIT SKIN GRAFTING RIGHT SIDE	2	C	19-09-2022 16:00	T10	60	170	22	112.0	114.0	112	110	110	112	114	112	110	108	108	110	108	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
151	DS	1359969	30	M	170	74	25.6	CLOSED FRACTURE DISTAL FEMUR LEFT SIDE	DISTAL FEMUR NAILING	1	A	20-09-2022 09:30	T8	90	170	21	79	84	83	89	88	83	82	82	83	86	85	82	82	83	86	85	86	85	82	82	-	-	-	-	-	-	-	-	-	-
152	MK	1376383	54	F	158	80	32.0	FUCO FRACTURE DISTAL FEMUR LEFT SIDE WITH METAL WORK IN SITU	IMPLANT REMOVAL + ORIF LEFT FEMUR PLATING	2	A	20-09-2022 12:00	T8	150	170	22	70	74	72	74	74	72	74	76	72	74	76	74	76	72	74	76	74	76	74	76	72	74	72	74	74	72	74	76
153	HK	1360565	35	M	167	73	26.2	POCO ORIF TIBIA RIGHT SIDE	DEBRIDEMENT AND IRRIGATION	2	A	20-09-2022 15:00	T10	60	160	22	96	94	92	96	94	94	98	96	99	98	99	98	96	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
154	SS	1232466	59	M	170	70	24.2	DIABETIC FOOT LEFT SIDE	BELOW KNEE AMPUTATION	3	A	21-09-2022 15:00	T10	60	170	21	96	84	82	78	74	76	80	72	62	64	63	80	72	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
155	JG	1384336	26	M	176	68	22.0	POCO ACL RECONSTRUCTION	REVISION ARTHROSCOPIC REPAIR LEFT	2	A	22-09-2022 09:30	T8	120	160	22	130	128	132	130	128	122	120	116	110	112	108	120	116	110	112	108	112	108	120	116	110	120	132	130	128	122	-	-
156	BD	1336648	23	M	169	69	24.2	FRACTURE BB LEFT LEG	ORIF BB LEG LEFT	1	B	22-09-2022 12:00	T8	120	150	22	108	100	99	98	98	96	94	96	94	90	84	94	96	94	90	84	90	84	94	96	94	94	99	98	98	96	-	-
157	PD	1380511	56	F	158	60	24.0	POCO TKR LEFT	ANTIBIOTIC BEAD INSERTION	3	C	22-09-2022 15:00	T10	60	170	23	114	110	109	110	126	112	118	114	112	120	122	118	114	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
158	MS	1342900	37	M	170	85	29.4	POCO K WIRE FIXATION GREAT TOE LEFT	DEBRIDEMENT AND VAC APPLICATION	2	A	22-09-2022 16:00	T10	60	160	22	99	100	98	107	113	106	104	102	98	97	96	104	102	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
159	VM	1380680	33	M	175	54	17.6	FRACTURE TIBIA WITH INFECTED METAL IN SITU	IMPLANT REMOVAL AND EXFIX APPLICATION	2	A	22-09-2022	T10	90	160	21	64	64	60	61	58	58	56	56	58	54	58	56	56	58	54	58	54	58	56	56	-	-	-	-	-	-	-	-	-	-
160	B	1385872	20	M	173	72	24.1	FRACTURE DISTAL TIBIA RIGHT SIDE WITH INFECTED BROKEN METAL WORK IN SITU	IMPLANT REMOVAL	2	B	24/09/2022 03:00PM	T8	105	170	21	86	90	89	98	100	96	91	86	92	96	80	91	86	92	96	80	96	80	91	86	92	91	89	-	-	-	-	-	-	-
161	GS	967655	35	M	176	72	23.2	POCO CRIF NOF RIGHT	IMPLANT REMOVAL	2	A	24-09-2022	T8	90	160	22	65	70	67	70	64	63	60	59	57	59	59	60	59	57	59	59	59	59	60	59	-	-	-	-	-	-	-	-	-	-
162	HK	1360565	34	M	169	65	22.8	POCO ORIF TIBIA	DEBRIDEMENT + VAC APPLICATION	2	C	24-09-2022 14:00	T10	45	170	21	90	90	92	88	86	84	82	84	82	84	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
163	LS	1385963	50	M	170	100	34.6	RIGHT ANKLE CELLULITIS	WOUND EXPLORATION	2	A	24-09-2022 14:30	T10	60	160	21	76	80	78	81	72	74	84	85	78	81	78	84	85	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164	SS	1386459	42	M	172	116	39.2	DISTAL FRACTURE FEMUR RIGHT	ORIF	2	C	25-09-2022 09:30	T8	120	150	21	85	81	77	70	65	63	65	61	69	68	69	65	61	69	68	69	68	69	65	61	69	65	77	70	65	63	-	-
165	AK	1386873	52	M	176	83	26.8	FRACTURE LEFT PROXIMAL TIBIA	ORIF TIBIA LEFT	1	A	27-09-2022 14:00	T8	120	170	21	78	76	72	70	70	66	67	64	66	62	62	67	64	66	62	62	62	62	67	64	66	67	72	70	70	66	-	-

S.no	HR 135	HR 140	HR 145	HR 150	AFTER SHIFTING TO PACU HR 0	PACU HR 30	PACU HR 60	PACU HR 90	PACU HR 120	PACU HR 150	PACU HR 180	PACU HR 210	PACU HR 240	PACU HR 270	PACU HR 300	PACU HR 330	PACU HR 360	SBP Base line	SBP 0	SBP 5	SBP 10	SBP 15	SBP 20	SBP 25	SBP 30	SBP 35	SBP 40	SBP 45	SBP 50	SBP 55	SBP 60	SBP 65	SBP 70	SBP 75	SBP 80	SBP 85	SBP 90	SBP 95	SBP 100	SBP 105	SBP 110	SBP 115	SBP 120	SBP 125	SBP 130	SBP 135	SBP 140	SBP 145
118	-	-	-	-	94	92	92	94	92	92	94	94	92	96	94	94	94	120	102	100	88	102	104	106	110	116	118	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119	-	-	-	-	108	110	106	108	108	110	108	108	108	106	108	108	108	116	118	116	112	110	102	106	110	112	110	108	116	102	106	110	112	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	98	97	99	98	98	97	98	94	98	96	98	98	98	120	120	118	117	116	114	113	112	110	110	109	108	107	110	114	118	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-
121	-	-	-	-	92	94	96	92	98	94	90	92	98	92	90	92	90	148	142	130	128	122	120	120	122	136	128	122	120	120	126	132	128	122	136	128	122	120	120	126	-	-	-	-	-	-	-	-
122	-	-	-	-	84	90	87	84	89	90	91	82	89	93	91	84	91	140	140	138	136	135	132	130	128	125	129	130	134	136	137	140	140	128	125	129	130	134	136	137	-	-	-	-	-	-	-	-
123	-	-	-	-	88	82	86	88	84	82	80	88	84	82	80	88	80	130	132	130	128	114	112	110	112	114	116	114	112	110	116	124	129	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-
124	-	-	-	-	100	103	101	100	102	103	98	98	102	96	98	100	98	110	112	116	120	125	127	130	130	128	126	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
125	-	-	-	-	68	70	68	68	64	70	72	70	64	68	72	68	72	144	142	142	140	140	136	130	134	136	140	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126	-	-	-	-	100	95	98	100	96	95	94	105	96	93	94	100	94	140	142	138	106	110	136	140	152	150	148	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
127	-	-	-	-	102	99	100	102	102	99	98	98	102	99	98	102	98	126	120	118	99	112	116	112	114	110	104	102	106	108	110	112	110	114	110	104	102	-	-	-	-	-	-	-	-	-	-	-
128	-	-	-	-	90	88	86	90	82	88	84	96	82	82	84	90	84	122	120	124	120	116	104	106	104	110	108	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
129	-	-	-	-	84	86	82	84	84	86	84	84	84	82	84	84	84	170	168	159	164	162	160	158	156	160	162	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	60	64	62	60	60	64	62	64	60	60	62	60	62	138	132	109	128	120	124	122	120	124	128	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
131	-	-	-	-	80	74	78	80	76	74	76	80	76	76	76	80	76	120	120	118	106	110	112	120	122	126	124	122	120	124	122	123	122	122	126	124	122	120	124	122	-	-	-	-	-	-	-	-
132	-	-	-	-	74	82	78	74	80	82	80	74	80	78	80	74	80	138	130	128	120	122	120	124	126	128	120	124	118	116	112	120	120	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
133	80	-	-	-	88	82	82	88	84	82	84	92	84	80	84	88	84	140	138	136	122	120	124	122	126	124	122	120	124	122	122	116	120	126	124	122	120	124	122	122	116	120	126	124	122	120	-	-
134	-	-	-	-	64	66	66	64	68	66	64	68	68	64	64	64	64	124	122	98	110	112	128	126	120	124	126	120	128	120	116	124	122	120	124	126	120	128	120	116	124	122	120	-	-	-	-	-
135	-	-	-	-	74	80	76	74	78	80	80	78	78	78	80	74	80	128	122	118	102	120	126	134	110	120	122	116	120	112	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
136	-	-	-	-	102	104	102	102	106	104	101	108	106	100	101	102	101	196	140	142	140	138	136	140	132	140	142	140	136	132	134	136	140	132	140	142	140	-	-	-	-	-	-	-	-	-	-	-
137	-	-	-	-	104	102	107	104	106	102	104	110	106	106	104	104	104	170	164	143	120	133	140	146	150	146	150	152	150	152	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
138	-	-	-	-	96	98	99	96	96	98	99	100	96	100	99	96	99	110	112	110	88	106	110	100	114	118	120	122	124	122	120	124	116	114	118	120	122	124	122	120	124	116	114	-	-	-	-	-
139	-	-	-	-	99	92	98	99	98	92	96	96	98	99	96	99	96	180	160	154	152	156	154	152	150	152	154	150	150	162	158	148	150	150	152	154	150	150	162	158	148	150	150	-	-	-	-	-
140	-	-	-	-	76	72	74	76	70	72	74	74	70	70	74	76	74	122	120	118	116	98	102	106	104	100	112	100	116	120	116	118	114	104	100	112	100	116	120	116	118	114	104	-	-	-	-	-
141	-	-	-	-	92	86	92	92	88	86	88	92	88	88	88	92	88	140	142	112	120	126	110	126	130	132	128	130	132	134	128	130	132	130	132	128	130	-	-	-	-	-	-	-	-	-	-	-
142	-	-	-	-	84	82	86	84	84	82	80	82	84	82	80	84	80	160	158	154	148	146	130	142	136	140	148	150	152	156	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
143	-	-	-	-	94	92	92	94	94	92	96	92	94	94	96	94	96	120	120	112	108	110	112	110	106	110	112	110	115	118	122	121	118	106	110	112	110	115	118	122	121	118	106	-	-	-	-	-
144	-	-	-	-	92	92	92	92	94	92	96	98	94	96	96	92	96	110	112	106	104	106	110	114	118	116	118	120	118	116	116	118	121	118	116	118	120	118	116	116	118	121	118	-	-	-	-	-
145	-	-	-	-	88	84	84	88	82	84	82	88	82	86	82	88	82	124	122	120	115	106	110	112	118	120	122	124	120	122	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
146	-	-	-	-	88	82	82	88	84	82	86	84	84	95	86	88	86	138	136	132	130	128	130	122	120	118	122	116	114	114	110	114	114	110	118	122	116	-	-	-	-	-	-	-	-	-	-	-
147	-	-	-	-	82	84	82	82	86	84	82	86	86	80	82	82	82	158	154	130	121	126	131	136	134	132	130	138	136	138	136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
148	-	-	-	-	110	110	106	110	108	110	108	116	108	110	108	110	108	148	146	130	119	126	134	140	138	136	134	136	138	132	130	136	138	138	136	134	136	-	-	-	-	-	-	-	-	-	-	-
149	-	-	-	-	76	78	80	76	82	78	76	76	82	78	76	76	76	158	150	152	156	148	146	152	156	144	141	146	148	146	150	144	148	156	144	141	146	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	110	110	108	110	108	110	108	114	108	106	108	110	108	120	122	121	118	120	116	118	120	116	118	116	121	120	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
151	-	-	-	-	83	82	82	83	82	82	82	82	85	83	82	89	82	120	122	110	95	100	108	110	106	104	110	106	108	100	102	106	110	106	104	110	106	-	-	-	-	-	-	-	-	-	-	-
152	72	76	72	74	72	74	74	72	74	74	76	74	76	72	74	74	76	142	131	130	122	134	121	112	110	116	120	126	124	121	120	112	124	110	116	120	126	124	121	120	112	124	110	116	120	126	124	121
153	-	-	-	-	92	98	94	94	98	98	96	98	99	99	98	96	96	140	132	120	134	136	138	132	130	142	141	132	131	136	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
154	-	-	-	-	82	80	74	76	80	80	72	80	63	62	80	78	72	146	148	136	132	144	140	148	144	140	131	140	148	150	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
155	-	-	-	-	132	120	128	122	120	120	116	120	108	110	120	130	116	116	120	106	102	90	112	116	110	106	104	106	110	110	118	120	116	110	106	104	106	110	110	118	120	116	110	-	-	-	-	-
156	-	-	-	-	99	94	98	96	94	94	96	94	84	94	94	98	96	144	142	142	140	132	148	150	152	147	146	146	150	150	150	150	146	152	147	146	146	150	150	150	150	146	152	-	-	-	-	-
157	-	-	-	-	109	118	126	112	118	118	114	118	122	112	118	110	114	140	138	111	146	142	145	140	138	139	136	132	142	140	148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
158	-	-	-	-	98	104	113	106	104	104	102	104	96	98	104	107	102	160	166	154	140	132	138	140	146	150	152	148	150	158	162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
159	-	-	-	-	60	56	58	58	56	56	56	56	58	58	56	61	56	140	138	120	112	110	116	110	108	104	110	116	112	114	116	112	102	108	104	110	116	-	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	89	91	100	96	91	91	86	91	80	92	91	98	86	166	158	140	138	120	112	122	124	128	126	122	120	112	116	118	120	124	128	126	122	120	112	116	-	-	-	-	-	-	-	-
161	-	-	-	-	67	60	64	63	60	60	59	60	59	57	60	70	59	122	121	119	118	111	116	110	112	118	116	112	110	110	111	126	122	112	118	116	112	-	-	-	-	-	-	-	-	-	-	-
162	-	-	-	-	92	82	86	84	82	82	84	82	82	82	82	88	84	136	138	126	122	124	122	126	124	122	128	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
163	-	-	-	-	78	84	72	74	84	84	85	84	78	78	84	81	85	130	126	122	116	106	104	110	102	116	112	108	110	111	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164	-	-	-	-	77	65	65	63	65	65	61	65	69	69	65	70	61	110	106	104	88	90	96	100	102	104	110	116	108	112	116	120	106	102	104	110	116	108	112	116	124	112	111	-	-	-	-	-
165	-	-	-	-	72	67	70	66	67	67	64	67	62	66	67	70	64	148	132	130	128	122	132	130	128	132	132	134	130	132	138	140	132	128	132	132	134	130	132	138	140	132	128	-	-	-	-	-

S.no	SBP 150	PACU SBP 00	PACU SBP 30	PACU SBP 60	PACU SBP 90	PACU SBP 120	PACU SBP 150	PACU SBP 180	PACU SBP 210	PACU SBP 240	PACU SBP 270	PACU SBP 300	PACU SBP 330	PACU SBP 360	DBP Base line	DBP 0	DBP 5	DBP 10	DBP 15	DBP 20	DBP 25	DBP 30	DBP 35	DBP 40	DBP 45	DBP 50	DBP 55	DBP 60	DBP 65	DBP 70	DBP 75	DBP 80	DBP 85	DBP 90	DBP 95	DBP 100	DBP 105	DBP 110	DBP 115	DBP 120	DBP 125	DBP 130	DBP 135	DBP 140	DBP 145	DBP 150
118	-	110.0	116.0	118.0	120.0	118.0	112.0	116.0	102	104	106	110	116	118	84.0	70.0	68.0	60.0	64.0	62.0	70.0	68.0	74.0	72.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119	-	110.0	112.0	110.0	108.0	116.0	102.0	106.0	110	102	106	110	112	110	78.0	74.0	72.0	74.0	70.0	68.0	64.0	70.0	72.0	74.0	74.0	72.0	70.0	76.0	72	74	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	-	112.0	110.0	110.0	109.0	108.0	107.0	110.0	116	114	113	112	110	110	84.0	82.0	80.0	80.0	79.0	78.0	78.0	76.0	74.0	73.0	72.0	70.0	69.0	70.0	80	80	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
121	-	122.0	136.0	128.0	122.0	120.0	120.0	126.0	122	120	120	122	136	128	88.0	80.0	76.0	72.0	68.0	60.0	64.0	66.0	70.0	74.0	72.0	78.0	80.0	80.0	76	72	68	60	64	66	70	74.0	72.0	-	-	-	-	-	-	-	-	-
122	-	128.0	125.0	129.0	130.0	134.0	136.0	137.0	135	132	130	128	125	129	92.0	90.0	88.0	87.0	85.0	82.0	80.0	77.0	74.0	79.0	82.0	85.0	87.0	90.0	88	87	85	82	80	77	74	79.0	82.0	-	-	-	-	-	-	-	-	-
123	-	112.0	114.0	116.0	114.0	112.0	110.0	116.0	114	112	110	112	114	116	80.0	98.0	98.0	88.0	90.0	86.0	82.0	84.0	82.0	80.0	86.0	82.0	80.0	84.0	98	88	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
124	-	130.0	128.0	126.0	125.0	130.0	132.0	138.0	125	127	130	130	128	126	80.0	82.0	84.0	85.0	87.0	90.0	92.0	94.0	90.0	88.0	90.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
125	-	134.0	136.0	140.0	141.0	145.0	146.0	148.0	140	136	130	134	136	140	86.0	100.0	88.0	70.0	74.0	70.0	68.0	70.0	72.0	73.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126	-	152.0	150.0	148.0	142.0	140.0	138.0	135.0	128	136	140	152	150	148	80.0	86.0	80.0	81.0	66.0	72.0	70.0	80.0	78.0	78.0	86.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
127	-	114.0	110.0	104.0	102.0	106.0	108.0	110.0	112	116	112	114	110	104	82.0	84.0	74.0	70.0	70.0	64.0	66.0	64.0	62.0	58.0	60.0	66.0	62.0	64.0	74	70	70	64	66	64	-	-	-	-	-	-	-	-	-	-	-	-	-
128	-	104.0	110.0	108.0	110.0	112.0	114.0	116.0	116	104	106	104	110	108	86.0	82.0	82.0	80.0	78.0	74.0	72.0	62.0	54.0	56.0	60.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
129	-	156.0	160.0	162.0	160.0	158.0	156.0	150.0	162	160	158	156	160	162	98.0	100.0	92.0	80.0	88.0	98.0	100.0	96.0	98.0	100.0	98.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130	-	120.0	124.0	128.0	120.0	112.0	116.0	120.0	120	124	122	120	124	128	86.0	98.0	74.0	76.0	66.0	80.0	76.0	84.0	82.0	88.0	86.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
131	-	122.0	126.0	124.0	122.0	120.0	124.0	122.0	110	112	120	122	126	124	76.0	70.0	68.0	54.0	68.0	72.0	68.0	70.0	74.0	78.0	80.0	82.0	80.0	80.0	68	54	68	72	68	70	74	78.0	80.0	-	-	-	-	-	-	-	-	-
132	-	126.0	128.0	120.0	124.0	118.0	116.0	112.0	122	120	124	126	128	120	68.0	70.0	64.0	62.0	68.0	62.0	58.0	64.0	62.0	68.0	66.0	70.0	72.0	74.0	64	62	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
133	-	126.0	124.0	122.0	120.0	124.0	122.0	122.0	120	124	122	126	124	122	98.0	100.0	98.0	84.0	76.0	70.0	74.0	82.0	88.0	84.0	80.0	84.0	82.0	76.0	98	84	76	70	74	82	88	84.0	80.0	84.0	82.0	76.0	98	84	76	-	-	-
134	-	120.0	124.0	126.0	120.0	128.0	120.0	116.0	112	128	126	120	124	126	70.0	68.0	62.0	54.0	60.0	72.0	74.0	72.0	78.0	80.0	80.0	84.0	86.0	84.0	62	54	60	72	74	72	78	80.0	80.0	84.0	86.0	84.0	-	-	-	-	-	-
135	-	110.0	120.0	122.0	116.0	120.0	112.0	126.0	120	126	134	110	120	122	88.0	80.0	84.0	82.0	86.0	80.0	88.0	90.0	96.0	94.0	86.0	88.0	84.0	82.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
136	-	132.0	140.0	142.0	140.0	136.0	132.0	134.0	138	136	140	132	140	142	82.0	74.0	72.0	70.0	72.0	74.0	78.0	72.0	70.0	74.0	76.0	72.0	68.0	74.0	72	70	72	74	78	72	-	-	-	-	-	-	-	-	-	-	-	-	-
137	-	150.0	146.0	150.0	152.0	150.0	152.0	154.0	142	140	146	150	146	150	86.0	84.0	82.0	80.0	86.0	84.0	82.0	86.0	84.0	84.0	82.0	80.0	86.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
138	-	114.0	118.0	120.0	122.0	124.0	122.0	120.0	106	110	100	114	118	120	96.0	84.0	80.0	72.0	68.0	70.0	74.0	76.0	72.0	70.0	76.0	74.0	74.0	70.0	80	72	68	70	74	76	72	70.0	76.0	74.0	74.0	70.0	-	-	-	-	-	-
139	-	150.0	152.0	154.0	150.0	150.0	162.0	158.0	156	154	152	150	152	154	100.0	98.0	96.0	92.0	74.0	76.0	78.0	80.0	84.0	88.0	84.0	86.0	88.0	90.0	96	92	74	76	78	80	84	88.0	84.0	86.0	88.0	90.0	-	-	-	-	-	-
140	-	104.0	100.0	112.0	100.0	116.0	120.0	116.0	100	102	106	104	100	112	76.0	72.0	68.0	66.0	64.0	62.0	64.0	68.0	72.0	74.0	72.0	78.0	76.0	74.0	68	66	64	62	64	68	72	74.0	72.0	78.0	76.0	74.0	-	-	-	-	-	-
141	-	130.0	132.0	128.0	130.0	132.0	134.0	128.0	126	110	126	130	132	128	100.0	98.0	80.0	76.0	72.0	68.0	70.0	74.0	74.0	78.0	76.0	80.0	84.0	88.0	80	76	72	68	70	74	-	-	-	-	-	-	-	-	-	-	-	-	-
142	-	136.0	140.0	148.0	150.0	152.0	156.0	140.0	146	130	142	136	140	148	100.0	90.0	96.0	84.0	72.0	68.0	70.0	72.0	74.0	78.0	76.0	80.0	82.0	84.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
143	-	106.0	110.0	112.0	110.0	115.0	118.0	122.0	110	112	110	106	110	112	74.0	71.0	68.0	64.0	88.0	70.0	72.0	70.0	70.0	68.0	70.0	72.0	74.0	70.0	68	64	88	70	72	70	70	68.0	70.0	72.0	74.0	70.0	-	-	-	-	-	-
144	-	118.0	116.0	118.0	120.0	118.0	116.0	116.0	106	110	114	118	116	118	74.0	70.0	68.0	62.0	70.0	68.0	76.0	74.0	70.0	72.0	70.0	74.0	70.0	76.0	68	62	70	68	76	74	70	72.0	70.0	74.0	70.0	76.0	-	-	-	-	-	-
145	-	118.0	120.0	122.0	124.0	120.0	122.0	124.0	106	110	112	118	120	122	70.0	74.0	68.0	64.0	68.0	70.0	70.0	72.0	74.0	72.0	74.0	78.0	80.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
146	-	120.0	118.0	122.0	116.0	114.0	114.0	110.0	128	130	122	120	118	122	82.0	80.0	80.0	78.0	76.0	74.0	70.0	68.0	66.0	70.0	74.0	70.0	66.0	64.0	80	78	76	74	70	68	-	-	-	-	-	-	-	-	-	-	-	-	-
147	-	134.0	132.0	130.0	138.0	136.0	138.0	136.0	146	140	136	134	132	130	92.0	98.0	90.0	86.0	80.0	78.0	74.0	72.0	70.0	70.0	76.0	74.0	72.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
148	-	138.0	136.0	134.0	136.0	138.0	132.0	130.0	140	142	140	138	136	134	92.0	90.0	92.0	96.0	84.0	82.0	80.0	82.0	84.0	86.0	84.0	80.0	84.0	82.0	92	96	84	82	80	82	-	-	-	-	-	-	-	-	-	-	-	-	-
149	-	156.0	144.0	141.0	146.0	148.0	146.0	150.0	148	146	152	156	144	141	86.0	96.0	92.0	94.0	90.0	90.0	88.0	86.0	90.0	88.0	82.0	98.0	86.0	92.0	92	94	90	90	88	86	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	120.0	116.0	118.0	116.0	121.0	120.0	122.0	120	116	118	120	116	118	86.0	80.0	75.0	70.0	64.0	68.0	70.0	72.0	70.0	74.0	72.0	70.0	74.0	76.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
151	-	106.0	104.0	110.0	106.0	108.0	100.0	102.0	100	108	110	106	104	110	68.0	60.0	62.0	64.0	58.0	60.0	64.0	66.0	56.0	58.0	60.0	64.0	60.0	56.0	62	64	58	60	64	66	-	-	-	-	-	-	-	-	-	-	-	-	-
152	116	110.0	116.0	120.0	126.0	124.0	121.0	120.0	134	121	112	110	116	120	98.0	80.0	74.0	71.0	78.0	64.0	52.0	68.0	66.0	74.0	78.0	74.0	76.0	64.0	74	71	78	64	52	68	66	74.0	78.0	74.0	76.0	64.0	74	71	78	68	66	74.0
153	-	130.0	142.0	141.0	132.0	131.0	136.0	134.0	136	138	132	130	142	141	78.0	68.0	61.0	64.0	70.0	78.0	80.0	86.0	84.0	82.0	98.0	94.0	84.0	86.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
154	-	144.0	140.0	131.0	140.0	148.0	150.0	142.0	144	140	148	144	140	131	86.0	100.0	90.0	96.0	98.0	96.0	100.0	96.0	92.0	90.0	98.0	100.0	98.0	96.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
155	-	110.0	106.0	104.0	106.0	110.0	110.0	118.0	110	112	116	110	106	104	84.0	76.0	68.0	54.0	82.0	84.0	80.0	82.0	80.0	76.0	74.0	76.0	70.0	68.0	68	54	82	84	80	82	80	76.0	74.0	76.0	70.0	68.0	-	-	-	-	-	-
156	-	152.0	147.0	146.0	146.0	150.0	150.0	150.0	132	148	150	152	147	146	86.0	100.0	88.0	70.0	86.0	100.0	90.0	96.0	90.0	94.0	96.0	92.0	88.0	88.0	88	70	86	100	90	96	90	94.0	96.0	92.0	88.0	88.0	-	-	-	-	-	-
157	-	138.0	139.0	136.0	132.0	142.0	140.0	148.0	142	145	140	138	139	136	96.0	98.0	100.0	80.0	82.0	76.0	78.0	80.0	84.0	92.0	91.0	96.0	92.0	94.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
158	-	146.0	150.0	152.0	148.0	150.0	158.0	162.0	132	138	140	146	150	152	90.0	98.0	82.0	80.0	96.0	92.0	96.0	88.0	90.0	92.0	96.0	100.0	98.0	94.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
159	-	108.0	104.0	110.0	116.0	112.0	114.0	116.0	110	116	110	108	104	110	80.0	86.0	74.0	72.0	68.0	66.0	52.0	58.0	60.0	64.0	64.0	66.0	68.0	66.0	74	72	68	66	52	58	-	-	-	-	-	-	-	-	-	-	-	-	-
160	-	124.0	128.0	126.0	122.0	120.0	112.0	116.0	120	112	122	124	128	126	98.0	92.0	84.0	70.0	64.0	66.0	68.0	70.0	70.0	72.0	74.0	80.0	82.0	84.0	84	70	64	66	68	70	70	72.0	74.0	-	-	-	-	-	-	-	-	-
161	-	112.0	118.0	116.0	112.0	110.0	110.0	111.0	111	116	110	112	118	116	84.0	76.0	72.0	64.0	60.0	62.0	60.0	68.0	66.0	58.0	60.0	62.0	64.0	66.0	72	64	60	62	60	68	-	-	-	-	-	-	-	-	-	-	-	-	-
162	-	124.0	122.0	128.0	122.0	130.0	132.0	138.0	124	122	126	124	122	128	84.0	82.0	86.0	70.0	72.0	70.0	80.0	86.0	81.0	82.0	84.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
163	-	102.0	116.0	112.0	108.0	110.0	111.0	102.0	106	104	110	102	116	112	78.0	76.0	64.0	52.0	54.0	66.0	64.0	72.0	74.0	70.0	72.0	76.0	72.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164	-	102.0	104.0	110.0	116.0	108.0	112.0	116.0	90	96	100	102	104	110	74.0	76.0	70.0	68.0	54.0	52.0	60.0	66.0	72.0	70.0	74.0	76.0	72.0	74.0	70	68	54	52	60	66	72	70.0	74.0	76.0	72.0	74.0	-	-	-	-	-	-
165	-	128.0	132.0	132.0	134.0	130.0	132.0	138.0	122	132	130	128	132	132	100.0	98.0	74.0	86.0	71.0	88.0	84.0	88.0	96.0	86.0	82.0	84.0	88.0	76.0	74	86	71	88	84	88	96	86.0	82.0	84.0	88.0	76.0	-	-	-	-	-	-

S.no	AFTER SHIFTING TO PACU DBP 00	PACU DBP 30	PACU DBP 60	PACU DBP 90	PACU DBP 120	PACU DBP 150	PACU DBP 180	PACU DBP 210	PACU DBP 240	PACU DBP 270	PACU DBP 300	PACU DBP 330	PACU DBP 360	MAP BASELINE	MAP 0 MIN IMMEDIATELY AFTER SPINAL	MAP 5MIN	MAP 10 MIN	MAP 15 MIN	MAP 20 MIN	MAP 25 MIN	MAP 30 MIN	MAP 35 MIN	MAP 40MIN	MAP 45MIN	MAP 50 MIN	MAP 55 MIN	MAP 60	MAP 65 MIN	MAP 70 MIN	MAP 75 MIN	MAP 80MIN	MAP 85MIN	MAP 90 MIN	MAP 95 MIN	MAP 100 MIN
118	60	64	62	60.0	64.0	62.0	70.0	68.0	74.0	70	68	74	80.0	116	81	79	69	77	76	82	82	88	87	92										
119	74	70	68	74.0	70.0	68.0	64.0	70.0	72.0	64	70	72	72.0	110	89	87	87	83	79	78	83	85	86	85	87	81	86	85	87	83				
120	80	79	78	80.0	79.0	78.0	78.0	76.0	74.0	78	76	74	70.0	116	95	93	92	91	90	90	88	86	85	84	83	82	83	91	93	88				
121	72	68	60	72.0	68.0	60.0	64.0	66.0	70.0	64	66	70	78.0	133	101	94	91	86	80	83	85	92	92	89	92	93	95	95	91	86	85	85	85	87	89
122	87	85	82	87.0	85.0	82.0	80.0	77.0	74.0	80	77	74	85.0	131	107	105	103	102	99	97	94	91	96	98	101	103	106	105	105	99	96	96	95	94	98
123	88	90	86	88.0	90.0	86.0	82.0	84.0	82.0	82	84	82	82.0	118	109	109	101	98	95	91	93	93	92	95	92	90	95	107	102	97				
124	85	87	90	85.0	87.0	90.0	92.0	94.0	90.0	92	94	90	88.0	108	92	95	97	100	102	105	106	103	101	102										
125	70	74	70	70.0	74.0	70.0	68.0	70.0	72.0	68	70	72	78.0	129	114	106	93	96	92	89	91	93	95	96										
126	81	66	72	81.0	66.0	72.0	70.0	80.0	78.0	70	80	78	80.0	123	105	99	89	81	93	93	104	102	101	105										
127	70	70	64	70.0	70.0	64.0	66.0	64.0	62.0	66	64	62	66.0	118	96	89	80	84	81	81	81	78	73	74	79	77	79	87	83	85	79	79	77	
128	80	78	74	80.0	78.0	74.0	72.0	62.0	54.0	72	62	54	62.0	118	95	96	93	91	84	83	76	73	73	77										
129	80	88	98	80.0	88.0	98.0	100.0	96.0	98.0	100	96	98	92.0	150	123	114	108	113	119	119	116	119	121	119										
130	76	66	80	76.0	66.0	80.0	76.0	84.0	82.0	76	84	82	82.0	126	109	86	93	84	95	91	96	96	101	97										
131	54	68	72	54.0	68.0	72.0	68.0	70.0	74.0	68	70	74	82.0	111	87	85	71	82	85	85	87	91	93	94	95	95	94	86	77	86	90	87	87	89	93
132	62	68	62	62.0	68.0	62.0	58.0	64.0	62.0	58	64	62	70.0	114	90	85	81	86	81	80	85	84	85	85	86	87	87	83	81	87				
133	84	76	70	84.0	76.0	70.0	74.0	82.0	88.0	74	82	88	84.0	135	113	111	97	91	88	90	97	100	97	93	97	95	91	104	96	93	88	90	95	100	97
134	54	60	72	54.0	60.0	72.0	74.0	72.0	78.0	74	72	78	84.0	109	86	74	73	77	91	91	88	93	95	93	99	97	95	83	77	80	89	91	88	95	93
135	82	86	80	82.0	86.0	80.0	88.0	90.0	96.0	88	90	96	88.0	123	94	95	89	97	95	103	97	104	103	96	99	93	97								
136	70	72	74	70.0	72.0	74.0	78.0	72.0	70.0	78	72	70	72.0	153	96	95	93	94	95	99	92	93	97	97	93	89	94	93	93	92	96	99	95		
137	80	86	84	80.0	86.0	84.0	82.0	86.0	84.0	82	86	84	80.0	142	111	102	93	102	103	103	107	105	106	105	103	108	103								
138	72	68	70	72.0	68.0	70.0	74.0	76.0	72.0	74	76	72	74.0	119	93	90	77	81	83	83	89	87	87	91	91	90	87	95	87	83	86	89	91	89	87
139	92	74	76	92.0	74.0	76.0	78.0	80.0	84.0	78	80	84	86.0	157	119	115	112	101	102	103	103	107	110	106	107	113	113	113	111	99	101	103	103	106	113
140	66	64	62	66.0	64.0	62.0	64.0	68.0	72.0	64	68	72	78.0	112	88	85	83	75	75	78	80	81	87	81	91	91	88	85	82	77	75	80	79	87	89
141	76	72	68	76.0	72.0	68.0	70.0	74.0	74.0	70	74	74	80.0	137	113	91	91	90	82	89	93	93	95	94	97	101	101	97	95	91	89	89	93		
142	84	72	68	84.0	72.0	68.0	70.0	72.0	74.0	70	72	74	80.0	147	113	115	105	97	89	94	93	96	101	101	104	107	103								
143	64	88	70	64.0	88.0	70.0	72.0	70.0	70.0	72	70	70	72.0	109	87	83	79	95	84	85	82	83	83	83	86	89	87	86	82	94	83	85	83	85	85
144	62	70	68	62.0	70.0	68.0	76.0	74.0	70.0	76	74	70	74.0	104	84	81	76	82	82	89	89	85	87	87	89	85	89	85	82	86	84	90	89	86	87
145	64	68	70	64.0	68.0	70.0	70.0	72.0	74.0	70	72	74	78.0	109	90	85	81	81	83	84	87	89	89	91	92	94	93								
146	78	76	74	78.0	76.0	74.0	70.0	68.0	66.0	70	68	66	70.0	124	99	97	95	93	93	87	85	83	87	88	85	82	79	91	90	87	89	87	84		
147	86	80	78	86.0	80.0	78.0	74.0	72.0	70.0	74	72	70	74.0	140	117	103	98	95	96	95	93	91	90	97	95	94	97								
148	96	84	82	96.0	84.0	82.0	80.0	82.0	84.0	80	82	84	80.0	135	109	105	104	98	99	100	101	101	102	101	99	100	98	107	110	102	100	98	100		
149	94	90	90	94.0	90.0	90.0	88.0	86.0	90.0	88	86	90	98.0	136	114	112	115	109	109	109	109	108	106	103	115	106	111	109	112	112	108	106	106		
150	70	64	68	70.0	64.0	68.0	70.0	72.0	70.0	70	72	70	70.0	117	94	90	86	83	84	86	88	85	89	87	87	89	91								
151	64	58	60	64.0	58.0	60.0	64.0	66.0	56.0	64	66	56	64.0	105	81	78	74	72	76	79	79	72	75	75	79	73	71	77	79	74	75	79	79		
152	71	78	64	71.0	78.0	64.0	52.0	68.0	66.0	52	68	66	74.0	136	97	93	88	97	83	72	82	83	89	94	91	91	83	87	89	89	81	75	87	85	90
153	64	70	78	64.0	70.0	78.0	80.0	86.0	84.0	80	86	84	94.0	122	89	81	87	92	98	97	101	103	102	109	106	101	102								
154	96	98	96	96.0	98.0	96.0	100.0	96.0	92.0	100	96	92	100.0	130	116	105	108	113	111	116	112	108	104	112	116	115	111								
155	54	82	84	54.0	82.0	84.0	80.0	82.0	80.0	80	82	80	76.0	114	91	81	70	85	93	92	91	89	85	85	87	83	85	85	75	91	91	88	90	90	87
156	70	86	100	70.0	86.0	100.0	90.0	96.0	90.0	90	96	90	92.0	129	114	106	93	101	116	110	115	109	111	113	111	109	109	109	95	108	116	109	113	110	113
157	80	82	76	80.0	82.0	76.0	78.0	80.0	84.0	78	80	84	96.0	134	111	104	102	102	99	99	99	102	107	105	111	108	112								
158	80	96	92	80.0	96.0	92.0	96.0	88.0	90.0	96	88	90	100.0	140	121	106	100	108	107	111	107	110	112	113	117	118	117								
159	72	68	66	72.0	68.0	66.0	52.0	58.0	60.0	52	58	60	66.0	123	103	89	85	82	83	71	75	75	79	81	81	83	83	87	82	81	79	71	77		
160	70	64	66	70.0	64.0	66.0	68.0	70.0	70.0	68	70	70	80.0	148	114	103	93	83	81	86	88	89	90	90	93	92	95	95	87	84	87	87	87	87	85
161	64	60	62	64.0	60.0	62.0	60.0	68.0	66.0	60	68	66	62.0	117	91	88	82	77	80	77	83	83	77	77	78	79	81	90	83	77	81	79	83		
162	70	72	70	70.0	72.0	70.0	80.0	86.0	81.0	80	86	81	82.0	124	101	99	87	89	87	95	99	95	97	97										
163	52	54	66	52.0	54.0	66.0	64.0	72.0	74.0	64	72	74	76.0	117	93	83	73	71	79	79	82	88	84	84	87	85	83								
164	68	54	52	68.0	54.0	52.0	60.0	66.0	72.0	60	66	72	76.0	104	86	81	75	66	67	73	78	83	83	88	87	85	88	87	81	70	69	77	83	84	84
165	86	71	88	86.0	71.0	88.0	84.0	88.0	96.0	84	88	96	84.0	141	109	93	100	88	103	99	101	108	101	99	99	103	97	96	101	90	103	100	103	107	101

S.no	MAP 105 MIN	MAP 110 MIN	MAP 115MIN	MAP 120 MIN	MAP 125 MIN	MAP 130 MIN	MAP 135 MIN	MAP 140MIN	MAP 145 MIN	MAP 150 MIN	AFTER SHIFTING TO PACU MAP 00 MIN	PACU MAP 30 MIN	PACU MAP 60 MIN	PACU MAP 90 MIN	PACU MAP 120 MIN	PACU MAP 150 MIN	PACU MAP 180 MIN	PACU MAP 210	PACU MAP 240	PACU MAP 270	PACU MAP 300	PACU MAP 330	PACU MAP 360	RR Base line	RR 0	RR 5	RR 10	RR 15	RR 20	RR 25	RR 30	RR 35	RR 40	RR 45	RR 50	RR 55	RR 60	RR 65
118											77	81	81	80	82	79	85	79	84	82	82	88	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-
119											86	84	82	85	85	79	78	83	82	78	83	85	85	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
120											91	89	89	90	89	88	89	89	87	90	88	86	83	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
121	90										89	91	83	89	85	80	85	85	87	83	85	92	95	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
122	100										101	98	98	101	101	100	99	96	93	97	94	91	100	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
123											96	98	96	97	97	94	93	94	92	91	93	93	93	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
124											100	101	102	98	101	104	107	104	102	105	106	103	101	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-
125											91	95	93	94	98	95	95	93	93	89	91	93	99	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-	-	-
126											105	94	97	101	91	94	92	96	97	93	104	102	103	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	-	-	-	-
127											85	83	77	81	82	79	81	80	80	81	81	78	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
128											88	89	85	90	89	87	87	80	71	83	76	73	77	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-
129											105	112	119	107	111	117	117	118	119	119	116	119	115	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-
130											91	85	96	91	81	92	91	96	96	91	96	96	97	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-
131	94										77	87	89	77	85	89	86	83	87	85	87	91	96	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
132											83	88	81	83	85	80	76	83	81	80	85	84	87	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
133	94	95	95	93	107	97	91				98	92	87	96	92	87	90	95	100	90	97	100	97	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
134	92	97	98	96							76	81	90	76	83	88	88	85	95	91	88	93	98	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
135											91	97	94	93	97	91	101	100	106	103	97	104	99	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
136											91	95	97	93	93	93	97	94	92	99	92	93	95	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
137											103	106	106	104	107	107	106	105	103	103	107	105	103	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
138	91	91	88	85							86	85	87	89	87	87	89	86	85	83	89	87	89	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
139	109	107	109	110							111	100	102	111	99	105	105	105	107	103	103	107	109	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
140	87	91	89	84							79	76	79	77	81	81	81	79	82	78	80	81	89	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
141											94	92	88	94	92	90	89	91	86	89	93	93	96	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
142											101	95	95	106	99	97	93	97	93	94	93	96	103	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
143	87	88	89	82							78	95	84	79	97	86	89	83	84	85	82	83	85	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
144	85	89	87	90							81	85	85	81	86	84	89	85	83	89	89	85	89	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
145											82	85	87	84	85	87	88	83	86	84	87	89	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
146											92	90	90	91	89	87	83	88	87	87	85	83	87	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
147											102	97	95	103	99	98	95	97	93	95	93	91	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
148											110	101	99	109	102	99	97	101	103	100	101	101	98	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
149											115	108	107	111	109	109	109	107	109	109	109	108	112	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
150											87	81	85	85	83	85	87	88	85	86	88	85	86	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
151											78	73	77	78	75	73	77	77	73	79	79	72	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
152	92	87	92	79	88	87	94	87	84	88	84	91	83	89	93	83	75	90	84	72	82	83	89	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
153											86	94	99	87	90	97	98	103	102	97	101	103	110	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
154											112	112	108	111	115	114	114	112	108	116	112	108	110	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
155	89	91	85	82							73	90	91	71	91	93	93	91	91	92	91	89	85	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
156	114	111	107	109							97	106	115	95	107	117	110	108	109	110	115	109	110	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
157											99	101	96	97	102	97	101	101	104	99	99	102	109	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-
158											102	114	112	103	114	114	118	103	106	111	107	110	117	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
159											84	80	81	87	83	82	73	75	79	71	75	75	81	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
160	88										88	85	86	87	83	81	84	87	84	86	88	89	95	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
161											80	79	80	80	77	78	77	82	83	77	83	83	80	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
162											88	89	89	87	91	91	99	99	95	95	99	95	97	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-
163											69	75	81	71	73	81	77	83	84	79	82	88	88	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
164	88	92	85	86							79	71	71	84	72	72	79	74	80	73	78	83	87	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
165	101	103	103	93							100	91	103	102	91	103	102	99	108	99	101	108	100	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

S.no	RR 70	RR 75	RR 80	RR 85	RR 90	RR 95	RR 100	RR 105	RR 110	RR 115	RR 120	RR 125	RR 130	RR 135	RR 140	RR 145	RR 150	PACU RR 00 MIN	PACURR 30 MIN	PACU RR 60	PACU RR 90	PACU RR 120 MIN	PACU RR 150 MIN	PACU RR 180 MIN	PACU RR 210 MIN	PACURR 240MIN	PACU RR 270	PACU RR 300	PACU RR 330 MIN	PACURR 360 MIN	SPO2 Base line	SPO2 00	SPO2 05	SPO2 10	SPO2 15	SPO2 20	SPO2 25	SPO2 30	SPO2 35	SPO2 40	SPO2 45	SPO2 50	SPO2 55	SPO2 60	SPO2 65	SPO2 70	SPO2 75	SPO2 80	SPO2 85	SPO2 90
118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-
119	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	96.0	96.0	99.0	98.0	96.0	98.0	98.0	98.0	99.0	99.0	100.0	100.0	99.0	98.0	98.0	99.0	-	-	-
120	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-
121	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	98.0	99.0	100.0	100.0	100.0	99.0
122	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
123	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	99.0	99.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	-	-	-	-
124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	-	-	-	-	-	-	-	-	-	-
125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	-
126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	-
127	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0
128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	-
129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	96.0	96.0	98.0	96.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-	-
131	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.0	98.0	99.0	99.0	99.0	99.0
132	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	100.0	100.0	98.0	100.0	100.0	98.0	99.0	100.0	98.0	99.0	99.0	99.0	100.0	98.0	98.0	100.0	-	-	-
133	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	99.0	99.0	99.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	98.0	99.0	100.0	99.0	100.0	99.0
134	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	-	-	-	-	-	-	-
136	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0
137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	100.0	100.0	100.0	100.0	100.0	99.0	98.0	99.0	100.0	99.0	100.0	100.0	100.0	-	-	-	-	-	-	-
138	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
139	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0
140	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.0	98.0	99.0	99.0	99.0	99.0	99.0
141	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0
142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-
143	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	99.0	99.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0
144	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0
145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
146	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	99.0	99.0	98.0	98.0	99.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-
148	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	94.0	96.0	96.0	96.0	96.0	96.0	98.0	98.0	96.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	98.0	98.0	98.0
149	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	96.0	98.0	98.0	98.0	98.0	98.0
150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-
151	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	99.0	99.0	99.0	98.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0	99.0	98.0	100.0	100.0	99.0	99.0	98.0	99.0
152	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0
153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	96.0	96.0	99.0	98.0	96.0	98.0	99.0	98.0	96.0	99.0	98.0	96.0	96.0	-	-	-	-	-	-	-
155	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	96.0	98.0	96.0	98.0	98.0	98.0
156	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	98.0	98.0	98.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.0	100.0	98.0	99.0	98.0	99.0	98.0
157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-
158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-
159	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
160	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
161	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-	-	-	-
163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
164	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
165	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	98.0	98.0	99.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	99.0	98.0	96.0	98.0	98.0	98.0	99.0

S.no	SPO2 95	SPO2 100	SPO2 105	SPO2 110	SPO2 115	SPO2 120	SPO2 125	SPO2 130	SPO2 135	SPO2 140	SPO2 145	SPO2 150	AFTER SHIFTING TO PACU SPO2 00	PACU SPO2 30	PACU SPO2 60	PACU SPO2 90	PACU SPO2 120	PACU SPO2 150	PACU SPO2 180	PACU SPO2 210	PACU SPO2 240	PACU SPO2 270	PACU SPO2 300	PACU SPO2 330	PACU SPO2 360	TEMPERATURE FOREHEAD Base line	TEMPERATURE forehead 0 MIN	TemP forehead 30 MIN	TemP forehead 60 MIN	TemP forehead 90 MIN	TemP forehead 120 MIN	TemP forehead 150 MIN	TemP forehead 180 MIN	TemP forehead 210	TemP forehead 240	TemP forehead 270	TemP forehead 300
118	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	96.9	96.7	96.4	96.8	96.9	96.9	97.0	97.1	97.2	97.2	97.3
119	-	-	-	-	-	-	-	-	-	-	-	-	98.0	96.0	98.0	98.0	98.0	99.0	99.0	96.0	98.0	98.0	98.0	99.0	99.0	96.9	97.0	96.8	97.0	97.1	96.8	96.8	96.6	96.8	96.9	97.0	97.2
120	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.1	97.0	96.9	96.7	96.4	96.4	96.2	96.0	96.5	96.7	96.8	96.9
121	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	98.1	98.2	98.4	97.9	97.4	98.1	97.5	97.0	97.0	97.1	96.9	96.8
122	97.0	97.0	97.0	-	-	-	-	-	-	-	-	-	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.1	97.0	96.9	96.7	96.5	96.4	96.7	96.7	96.9	97.1	97.0	97.2
123	-	-	-	-	-	-	-	-	-	-	-	-	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	96.9	96.0	94.8	95.4	96.0	96.4	96.8	96.6	96.8	96.9	97.1	97.2
124	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	97.1	97.4	97.2	96.9	96.9	96.7	96.8	96.6	96.5	96.4	96.2	96.5
125	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.1	97.4	97.2	97.2	97.3	96.9	96.7	96.5	96.2	96.2	96.7	96.8
126	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.1	97.4	96.9	96.7	96.4	96.2	96.0	95.9	96.2	96.2	96.4	96.5
127	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.2	97.0	96.9	97.1	97.0	97.1	96.9	96.8	96.1	96.6	96.0	95.4
128	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.4	97.1	96.0	96.4	97.0	97.0	96.4	96.5	97.0	96.8	96.6	96.1
129	-	-	-	-	-	-	-	-	-	-	-	-	96.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	97.4	97.3	97.1	97.0	96.9	96.5	96.8	96.5	96.1	95.8	95.7	96.0
130	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	97.4	97.5	97.0	97.1	96.9	96.5	96.8	96.6	96.6	96.1	96.2	95.8
131	99.0	99.0	99.0	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.9	95.0	96.8	96.5	96.5	96.4	96.4	96.5	96.1	96.4	95.8	95.7
132	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	98.0	99.0	100.0	98.0	99.0	100.0	98.0	99.0	100.0	98.0	99.0	98.0	98.1	98.4	97.9	97.4	98.1	97.5	97.0	97.1	96.9	96.8	96.9
133	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	98.0	-	-	-	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	98.1	98.4	97.9	97.4	98.0	97.5	97.0	97.1	96.9	96.8	96.9	97.1
134	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.1	97.9	97.4	97.2	97.0	96.9	96.9	97.4	97.1	97.0	96.8	96.6
135	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	97.2	97.1	97.1	97.0	97.2	96.9	96.8	96.6	97.4	97.1	96.8
136	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.5	98.6	97.6	97.9	97.6	97.8	96.9	95.8	96.8	96.9	96.9	94.8
137	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	99.0	98.0	99.0	100.0	99.0	100.0	99.0	98.0	99.0	100.0	99.0	96.9	97.6	97.2	97.0	97.4	96.8	96.6	96.6	96.8	96.9	97.0	97.5
138	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	96.9	97.1	96.9	97.4	97.2	97.4	97.0	96.8	96.9	96.6	96.8
139	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.8	97.0	97.1	96.9	96.8	96.9	96.9	96.8	97.0	96.9	96.8	96.6
140	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	95.9	95.8	95.9	96.8	96.9	96.8	96.6	96.6	96.5	96.5	96.6	96.4
141	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.6	97.0	97.1	96.9	96.8	96.9	96.8	96.1	95.9	96.8	96.8	96.4
142	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.1	97.8	97.6	97.0	96.8	96.6	96.8	96.5	96.4	96.2	96.0	95.8
143	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	96.4	97.8	98.0	98.1	97.9	97.6	97.8	96.9	96.8	96.8	96.8	96.9
144	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	96.8	96.0	96.6	96.8	96.8	97.0	96.4	96.3	96.2	96.4	96.6
145	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	97.6	97.4	97.2	97.0	96.8	96.6	96.4	96.0	96.1	96.8	96.4
146	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.9	96.7	97.0	97.2	97.4	96.9	96.8	96.6	96.1	96.0	96.8	96.4
147	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	98.0	98.0	98.0	98.0	98.0	99.0	98.0	98.0	98.0	98.0	98.0	98.6	98.5	98.4	97.8	97.3	96.8	97.1	97.0	97.3	97.2	97.1	97.4
148	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	98.0	98.0	96.0	96.0	98.0	96.0	98.0	98.0	96.0	96.0	98.0	97.9	97.6	97.4	98.0	98.4	97.3	96.8	97.0	97.1	97.3	97.2	97.0
149	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.8	96.1	96.0	95.9	95.8	95.9	96.0	96.2	96.4	96.2	96.6	96.8
150	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.7	97.1	97.2	97.4	97.6	97.0	96.9	95.8	96.1	96.4	96.8	95.9
151	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	99.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	100.0	96.8	96.9	96.9	97.0	97.1	97.0	96.9	96.7	96.6	96.4	96.1	95.9
152	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	98.0	97.5	97.6	97.6	97.5	96.9	96.8	96.7	96.4	96.1	95.6
153	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	96.5	96.0	96.5	96.6	96.6	96.5	96.1	95.8	95.7	96.0	96.2
154	-	-	-	-	-	-	-	-	-	-	-	-	98.0	96.0	98.0	99.0	98.0	96.0	99.0	96.0	98.0	99.0	98.0	96.0	99.0	96.5	97.0	97.4	97.1	96.9	96.4	96.8	97.1	96.6	96.8	96.6	96.1
155	98.0	98.0	98.0	96.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	96.8	96.9	97.0	97.1	96.8	96.5	96.6	95.6	95.4	96.6	96.1	95.4
156	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	99.0	98.0	99.0	99.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	98.9	98.8	98.6	97.6	96.9	96.8	96.4	96.6	96.8	96.1	96.9	97.4
157	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.8	97.1	97.4	97.9	97.1	96.9	96.8	96.9	96.5	96.4	96.2	95.9
158	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	99.0	99.0	99.0	99.0	99.0	98.0	99.0	99.0	99.0	99.0	99.0	97.4	97.8	96.9	97.5	97.4	96.8	97.0	97.1	96.9	96.5	96.2	96.0
159	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	96.9	95.4	95.0	95.7	96.4	96.5	96.8	96.8	96.7	96.6	96.1
160	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.2	97.0	96.9	97.1	97.1	97.0	96.8	96.6	96.8	96.4	95.4	96.1
161	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.2	97.0	96.4	95.6	95.9	96.2	97.0	96.6	96.4	96.5	96.0	95.6
162	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.4	97.8	97.5	96.8	96.9	97.0	97.1	97.1	96.1	96.5	96.5	96.1
163	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.1	98.4	97.9	97.4	98.1	97.5	97.0	97.1	97.0	96.9	96.8	96.7
164	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.9	96.9	97.0	97.1	97.1	96.8	96.6	96.6	95.9	96.8	96.6	96.4
165	100.0	100.0	100.0	99.0	100.0	100.0	-	-	-	-	-	-	98.0	99.0	100.0	100.0	100.0	99.0	100.0	99.0	100.0	100.0	100.0	99.0	100.0	97.4	97.3	97.1	96.9	96.8	97.3	97.2	96.6	96.4	96.8	96.8	96.6

S.no	TemP forehead 330	TemP forehead 360	Temp tympanic memb Base line	Temp tympanic memb 0	Temp tympanic memb 30	Temp tympanic memb 60	Temp tympanic memb 90	Temp tympanic memb 120	Temp tympanic memb 150	Temp tympanic memb 180	Temp tympanic memb 210	Temp tympanic memb 240	Temp tympanic memb 270	Temp tympanic memb 300	Temp tympanic memb 330	Temp tympanic memb 360	Rescue drug Tramadol	Onset of shivering	Cessation of shivering	Bradycardia	Hypotension	Nausea vomiting	Dizziness/ sedation	Shivering	Grading of shivering as per Wrench Grade 0	Wrench Grade 1	Wrench Grade 2	Wrench Grade 3	Wrench Grade 4	MOSS/A SCORE 6	MOSS/A SCORE 5	MOSS/A SCORE 4	MOSS/A GRADE 3	MOSS/A GRADE 2	MOSS/A GRADE 1	MOSS/A SCORE 0
118	97.4	97.5	98.1	98.0	97.9	97.7	97.5	97.2	97.7	97.8	97.9	98.0	98.1	98.2	98.2	98.3	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
119	96.8	96.4	97.5	97.6	97.9	97.1	97.4	96.4	96.8	96.8	96.9	97.1	97.1	97.9	97.2	97.5	50.0	40.0	5.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
120	96.9	97.0	98.0	98.1	98.3	98.4	98.2	97.9	97.7	97.5	97.4	97.0	97.5	97.7	97.8	98.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
121	96.9	97.1	99.0	98.5	98.1	97.9	98.1	98.0	97.8	97.7	97.4	97.1	97.4	97.9	97.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
122	97.3	97.1	98.0	98.2	98.1	98.4	98.0	97.9	97.7	97.5	97.2	97.7	97.9	98.1	98.2	98.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
123	96.8	96.4	97.6	96.2	95.8	96.2	96.5	96.9	96.8	96.8	96.9	97.1	97.9	97.8	97.2	97.5	-	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-
124	96.6	96.5	98.0	98.3	98.0	97.9	97.8	96.8	96.9	97.1	97.2	97.4	97.5	97.8	97.8	97.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
125	96.9	97.0	98.0	98.3	98.2	98.0	97.9	97.5	97.4	97.4	97.2	97.3	97.4	97.5	97.7	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
126	96.7	96.8	98.0	98.3	98.0	98.1	97.9	97.8	97.5	97.4	97.2	97.2	97.7	97.9	98.0	98.2	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
127	96.0	96.1	98.0	98.1	97.9	98.0	98.0	97.8	97.9	97.1	96.8	96.2	96.1	96.0	96.4	97.0	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
128	96.6	96.9	98.1	98.1	96.2	96.9	98.4	98.2	97.9	97.4	97.4	97.9	97.8	97.8	97.6	97.4	50.0	30.0	5.0	-	-	-	-	P	-	-	-	P	-	-	-	P	-	-	-	-
129	96.2	96.2	98.2	98.0	98.1	98.0	97.8	97.7	97.4	97.0	96.9	96.2	96.4	95.1	96.6	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
130	96.0	96.4	98.0	98.1	98.0	97.2	97.4	97.8	97.6	97.4	97.4	97.0	97.1	97.0	96.8	97.2	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
131	96.0	96.2	97.8	97.2	94.8	97.4	97.2	96.8	97.0	96.9	96.2	96.4	95.1	96.6	96.8	96.9	50.0	12.0	5.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
132	97.1	97.0	99.0	98.5	98.1	97.9	98.1	98.0	97.8	97.7	97.4	97.1	97.4	97.9	97.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
133	97.0	96.8	99.0	98.5	98.1	97.9	98.1	98.1	98.0	98.6	98.4	97.8	98.0	97.9	97.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
134	96.8	96.9	98.8	98.6	98.2	98.0	97.9	97.8	97.8	97.4	97.8	98.0	98.4	97.9	97.4	97.1	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
135	96.9	96.9	98.1	98.6	98.2	98.0	97.9	97.8	97.9	97.4	97.8	98.0	98.4	97.9	97.4	97.1	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
136	95.6	95.8	99.6	98.6	98.4	98.4	98.2	98.5	97.5	97.4	96.6	97.3	96.0	96.4	96.8	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
137	97.4	96.8	97.6	98.0	97.9	97.8	97.6	97.4	97.0	96.9	96.0	96.2	97.2	97.0	97.1	96.9	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
138	97.0	97.2	96.8	96.7	97.0	97.4	97.2	97.0	96.4	96.2	96.0	96.4	96.2	96.8	97.0	97.2	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
139	96.6	96.4	96.6	96.8	97.0	96.2	96.0	96.0	95.6	95.2	94.8	94.2	94.0	96.6	96.4	95.8	-	30.0	8.0	-	-	-	-	P	-	-	P	-	-	-	P	-	-	-	-	-
140	96.6	96.7	96.1	95.7	95.5	93.9	94.1	94.8	95.0	95.2	95.5	94.9	94.6	95.1	94.8	91.9	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
141	96.4	96.2	96.8	96.9	97.9	97.9	98.0	97.8	97.9	96.8	96.8	96.9	97.0	97.0	99.2	97.1	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
142	96.0	96.1	97.6	97.0	97.8	97.6	97.6	98.0	98.1	98.0	97.8	97.6	97.4	97.8	97.6	97.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
143	96.9	94.8	98.1	99.4	99.0	98.4	98.2	98.5	98.5	98.4	98.0	97.5	97.9	97.4	96.6	96.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
144	96.6	96.4	98.4	98.0	97.5	95.7	97.9	98.0	98.1	87.8	96.9	96.8	96.9	96.8	97.0	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
145	96.3	96.4	98.1	98.0	97.9	97.8	97.8	97.4	97.6	97.2	97.4	97.8	97.6	98.1	97.2	97.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
146	96.0	96.6	97.4	93.2	97.1	96.0	96.2	96.4	96.1	94.1	92.6	93.2	93.1	95.8	95.2	95.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
147	97.0	97.2	97.6	97.9	98.1	97.8	98.6	99.0	97.9	96.8	98.0	98.1	98.0	97.9	97.8	97.9	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
148	97.1	97.4	97.9	97.6	98.1	98.6	97.8	99.4	98.9	97.8	97.4	97.9	97.8	97.8	97.6	97.8	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
149	96.9	97.2	96.6	95.8	96.8	96.9	97.8	97.2	98.0	97.0	97.3	96.8	96.3	96.0	95.6	95.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
150	95.6	96.8	99.1	98.6	98.4	98.6	98.1	98.2	98.0	97.9	97.9	97.8	97.6	97.2	97.1	97.0	-	-	-	-	-	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
151	95.8	95.6	98.2	98.0	98.0	98.0	97.8	97.6	97.7	97.8	97.0	96.0	96.2	97.4	97.5	97.2	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
152	95.1	95.0	98.1	98.0	98.4	98.2	98.2	98.4	98.0	97.4	97.0	96.8	96.9	96.1	95.8	95.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
153	96.2	95.8	97.8	97.7	97.0	96.8	97.2	96.8	97.0	95.0	93.5	92.7	92.6	96.6	96.8	96.9	-	40.0	6.0	-	-	-	-	P	-	-	P	-	-	-	P	-	-	-	-	-
154	96.6	96.9	99.2	97.9	98.1	97.9	97.4	97.6	97.2	97.9	97.4	97.8	97.1	96.4	97.2	97.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
155	95.1	95.6	98.1	97.9	98.0	98.2	97.4	97.8	97.6	97.1	97.2	96.8	96.6	96.1	96.0	96.3	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
156	97.2	97.0	97.8	97.7	97.1	99.4	97.4	96.6	95.2	95.5	98.0	94.9	95.1	96.6	96.2	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
157	96.4	96.6	99.1	99.0	98.2	98.2	98.0	97.9	97.4	97.5	97.8	97.5	97.2	96.1	96.6	96.9	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
158	96.4	96.0	98.2	98.5	98.0	98.1	97.9	97.6	97.8	97.6	97.5	97.7	97.5	96.4	96.1	95.9	50.0	30.0	6.0	-	-	-	-	P	-	-	-	-	P	-	P	-	-	-	-	-
159	96.6	97.4	98.3	98.0	96.4	95.0	96.5	96.9	97.0	97.2	97.4	97.6	97.4	97.0	97.4	97.2	-	40.0	7.0	-	P	-	-	P	-	-	P	-	-	-	P	-	-	-	-	-
160	96.2	96.2	98.0	98.0	97.2	97.8	97.6	97.9	97.7	97.4	97.2	97.0	97.0	97.1	96.9	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
161	95.9	96.4	98.1	98.0	96.2	95.7	96.5	97.1	97.2	97.4	97.8	96.6	96.1	95.9	96.2	96.4	-	35.0	10.0	-	-	-	-	P	-	P	-	-	-	-	P	-	-	-	-	-
162	96.1	97.0	98.9	98.6	98.4	98.2	97.1	98.1	98.1	97.8	97.4	97.3	97.2	97.6	97.2	97.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
163	96.8	96.8	99.0	98.5	98.1	97.9	98.1	98.0	97.8	97.7	97.4	97.4	97.9	97.4	97.2	97.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
164	96.2	96.2	99.4	98.9	98.6	97.9	97.9	97.6	97.4	97.0	96.8	96.9	97.2	97.0	96.9	96.8	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
165	96.9	96.4	98.1	98.0	97.9	96.8	97.4	97.8	97.9	97.2	97.1	96.8	96.9	97.2	97.1	96.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-

S.no	Name	MRD	Age	Sex	HEIGHT (Cms)	WEIGHT	BMI	diagnosis	proposed surgery	ASA	GROUP	anesthesia start : date / time	highest dermatomal level	duration of surgery (minutes)	Duration of Spinal Anaesthesia (minutes)	Operating room temperature (°C)	HR (Base line)	HR 0	HR 5	HR 10	HR 15	HR 20	HR 25	HR 30	HR 35	HR 40	HR 45	HR 50	HR 55	HR 60	HR 65	HR 70	HR 75	HR 80	HR 85	HR 90	HR 95	HR 100	HR 105	HR 110	HR 115	HR 120	HR 125	HR 130
166	AB	1300667	18	M	173	72	24.1	FRACTURE DISTAL FEMUR LEFT SIDE	ORIF FEMUR LEFT	2	C	27-09-2022 16:00	T8	135	180	21	90	88	88	86	89	94	82	86	88	90	92	82	86	88	90	92	90	92	82	86	88	82	88	86	89	94	82	86
167	AS	1369549	25	M	170	70	24.2	COMPLETE ACL TEAR LEFT SIDE	ARTHROSCOPIC ACL RECONSTRUCTION	1	C	28-09-2022	T8	125	160	21	96	90	92	90	88	86	77	76	75	76	77	77	76	75	76	77	76	77	77	76	75	77	92	90	88	86	77	-
168	HK	518926	49	M	169	70	24.5	FUCO BKA RIGHT SIDE	STUMP REVISION	2	A	28-09-2022 17:00	T8	70	170	21	64	64	61	60	59	57	56	54	54	56	56	56	54	54	56	56	-	-	-	-	-	-	-	-	-	-	-	-	-
169	R	1385602	54	F	163	85	32.0	CLOSED FRACTURE NOF RIGHT	CRIF SCREW FIXATION	2	B	29-09-2022 12:00	T8	120	180	22	68	64	66	66	62	61	64	64	62	68	62	64	64	62	68	62	64	64	62	64	66	66	62	61	-	-
170	HK	1360565	35	M	170	85	29.4	POCO ORIF TIBIA RIGHT WITH VAC IN SITU	DEBRIDEMENT AND VAC APPLICATION	2	B	29-09-2022 15:00	T10	60	160	22	76	74	74	75	72	71	74	73	70	68	66	74	73	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171	JS	1383126	37	M	173	66	22.1	POCO BKA LEFT LOWER LIMB	REVISION AMPUTATION AND STUMP CLOSURE	2	A	01-10-2022 11:00	T8	60	170	21	92	90	92	92	88	86	88	86	87	84	84	88	86	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
172	AD	1364367	32	M	161	60	23.1	OSTEOLYTIC LESION LEFT NECK FEMUR	CRIF FEMUR LEFT SIDE	2	B	01-10-2022 15:00 PM	T8	90	160	22	70	75	76	74	80	84	80	76	74	70	68	80	76	74	70	68	70	68	80	76	-	-	-	-	-	-	-	-	-	-	-
173	KS	1244919	29	M	169	59	20.7	FUCO NON UNION FRACTURE RIGHT MIDSHAFT	ORIF FEMUR	2	B	03-10-2022 10:00	T8	120	170	22	72	70	70	74	72	68	66	70	72	74	74	66	70	72	74	74	74	74	74	66	70	72	66	70	74	70	68	-	-	-
174	DS	1372389	42	M	173	51	17.0	FUCO FRACTURE PROXIMAL TIBIA WITH EX-FIX IN SITU	ORIF TIBIA	2	A	04-10-2022 09:00	T8	120	160	22	68	72	70	72	68	64	68	66	70	64	66	68	66	70	64	66	64	66	68	66	70	68	70	72	68	64	-	-
175	RK	1388110	47	M	164	76	28.3	LOOSE BODIES RIGHT KNEE	ARTHROSCOPIC REMOVAL OF LOOSE BODIES	1	B	04-10-2022 11:00	T8	90	180	22	120	118	116	115	113	98	95	94	94	98	96	95	94	94	98	96	98	96	95	94	-	-	-	-	-	-	-	-	-	-
176	GK	1379378	52	M	180	80	24.7	DIABETIC FOOT LEFT SIDE	BELOW KNEE AMPUTATION	3	A	06-10-2022 10:00	T10	60	160	22	92	100	100	102	104	100	99	96	99	102	100	99	96	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
177	MJ	605957	48	F	159	60	23.7	LEFT INTERTROCHANTERIC FRACTURE	CRIF PFN LEFT SIDE	2	C	06-10-2022	T8	90	170	22	78	84	80	84	84	86	90	88	86	74	80	90	88	86	74	80	74	80	90	88	-	-	-	-	-	-	-	-	-	-
178	LS	1389086	42	M	186	96	27.7	POCO FRACTURE BOTH BONE LEG LEFT SIDE	EXFIX READJUSTMENT	2	A	06-10-2022	T10	60	180	21	96	95	94	98	94	96	92	90	93	89	83	92	90	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
179	KS	1359753	30	M	170	75	26.0	POCO DISTAL FEMUR WITH EXFIX	DEBRIDEMENT OF WOUND	2	B	07-10-2022 10:00	T8	60	180	22	91	78	70	72	70	68	62	66	72	74	64	62	66	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180	PG	1384505	29	M	176	78	25.2	POCO FRACTURE PROXIMAL TIBIA WITH EXFIX IN SITU	PROXIMAL TIBIA PLATING LEFT	2	B	07-10-2022	T8	120	160	22	92	110	106	108	102	98	98	102	108	100	96	98	102	108	100	96	100	96	98	102	108	98	106	108	102	98	-	-
181	SK	928278	57	F	162	70	26.7	POCO INFECTED TKR	SYNOVECTOMY	3	B	07-10-2022	T8	120	170	22	88	94	90	94	96	90	92	94	90	88	86	92	94	90	88	86	88	86	92	94	90	92	90	94	96	90	-	-
182	KS	1392681	56	M	173	56	18.7	CELLULITIS LEFT FOOT	INCISION AND DRAINAGE	2	B	07-10-2022 15:30	T10	60	160	21	110	109	107	97	96	94	88	84	86	84	80	88	84	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
183	RK	1248855	35	M	170	85	29.4	POCO CRIF BB LEFT LEG WITH INFECTED METAL WORK INSITU	IMPLANT REMOVAL	2	B	08-10-2022 13:00	T8	90	180	22	80	90	88	94	96	99	94	90	88	86	82	94	90	88	86	82	86	82	86	82	94	90	-	-	-	-	-	-	-	-	-
184	RG	1394476	46	F	152	63	27.3	FRACTURE 1ST METATARSAL	K-WIRE	1	C	10-10-2022 15:00	T10	45	180	22	108	114	110	106	97	96	94	88	84	86	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
185	SK	1358758	56	M	173	84	28.1	SWELLING RIGHT KNEE	KNEE ARTHROTOMY	2	B	11-10-2022 09:00	T8	90	180	22	68	74	70	69	65	78	80	78	86	88	72	80	78	86	88	72	88	72	80	78	-	-	-	-	-	-	-	-	-	-
186	R	1395865	29	F	156	60	24.7	FEMUR MID SHAFT FRACTURE	ORIF FEMUR	2	B	12-10-2022 10:15	T8	120	170	21	80	90	88	90	94	96	90	88	86	84	82	90	88	86	84	82	84	82	90	88	86	90	88	90	92	96	-	-
187	JS	1395217	46	M	180	70	21.6	DIABETIC FOOT LEFT SIDE	BKA LEFT SIDE	3	A	13-10-2022 03:00	T10	90	160	22	108	106	104	110	102	106	98	92	96	96	90	98	92	96	96	90	96	90	98	92	-	-	-	-	-	-	-	-	-	-
188	LS	1295946	19	M	176	85	27.4	FUCO CRIF RIGHT TIBIA NAIL WITH NON UNION	ORIF PLATING	2	B	13-10-2022 12:00	T8	120	170	22	76	74	72	70	70	66	64	66	65	70	72	64	66	65	70	72	70	72	64	66	65	64	72	70	68	66	-	-
189	SS	1386459	42	M	176	83	26.8	POCO ORIF DISTAL FEMUR LEFT SIDE	DEBRIDEMENT	2	A	15-10-2022 15:00	T10	60	160	22	76	86	84	86	82	80	78	74	76	74	72	78	74	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
190	GS	1392929	40	M	176	80	25.8	FRACTURE TIBIA WITH EXFIX IN SITU	ORIF TIBIA LEFT	2	C	17-10-2022 10:00	T8	120	180	22	80	75	74	68	66	62	58	55	56	54	56	58	55	56	54	56	54	56	58	55	56	58	74	68	60	62	-	-
191	RK	1309264	51	M	172	72	24.3	DIABETIC FOOT RIGHT SIDE	DEBRIDEMENT	3	A	17-10-2022 14:00	T10	60	170	22	92	99	96	99	90	96	94	92	94	92	90	94	92	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
192	HS	1395933	56	M	169	60	21.0	FRACTURE TIBIA RIGHT SIDE WITH EXFIX IN SITUQ	DEBRIDEMENT	2	A	17-10-2022 15:00	T10	60	160	22	87	90	88	86	88	90	88	86	82	80	80	88	86	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
193	KS	1392681	56	M	170	70	24.2	DIABETIC FOOT LEFT SIDE	DEBRIDEMENT	3	B	17-10-2022	T10	60	180	21	98	98	96	89	89	80	76	82	88	86	82	76	82	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
194	SK	301755	45	M	170	85	29.4	OPEN WOUND OVER FOOT WITH FRACTURE PROXIMAL PHALANX LEFT FOOT	ORIF	2	A	17-10-2022 18:00	T10	60	170	22	90	98	96	92	90	99	88	86	90	92	90	88	86	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
195	PS	1395300	19	M	164	65	24.2	POCO ABOVE KNEE AMPUTATION LEFT SIDE	STUMP CLOSURE	2	C	18-10-2022 10:00	T10	60	160	22	88	90	80	86	89	94	82	86	88	90	92	82	86	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
196	RK	1399709	60	M	168	74	26.2	DIABETIC FOOT RIGHT	GREAT TOE AMPUTATION RIGHT	3	B	19-10-2022 12:00	T10	45	150	22	98	99	99	102	100	101	97	96	98	100	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
197	AS	1396890	28	M	160	80	31.3	POCO CLOSED FRACTURE BB LEFT LEG WITH EXFIX IN SITU	SPLIT SKIN GRAFTING	2	A	20-10-2022 12:00	T8	60	170	21	76	80	77	78	77	79	78	79	80	80	81	78	79	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198	SS	1386459	42	M	165	73	26.8	POCO DISTAL FEMUR ORIF	DEBRIDEMENT AND VAC APPLICATION	2	A	20-10-2022 13:30	T8	60	160	22	106	109	108	106	102	104	102	102	104	100	98	102	102	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
199	SK	301755	45	M	168	70	24.8	POCO DEBRIDEMENT + K WIRE FIXATION OF RIGHT FOOT	DEBRIDEMENT AND IRRIGATION OF WOUND	2	C	20-10-2022 15:00	T10	60	180	22	90	99	96	98	102	101	106	101	98	99	96	106	101	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200	NG	1401207	39	F	159	68	26.9	LATERAL CONDYLE FRACTURE PROXIMAL TIBIA LEFT SIDE	ORIF TIBIA	2	B	22-10-2022 09:30	T8	120	160	21	84	90	88	87	87	86	85	85	84	83	84	85	85	84	83	84	83	84	85	85	84	85	88	87	87	86	-	-
201	S	1398373	28	M	180	69	21.3	POCO EXFIX APPLICATION LEFT LOWER LIMB	DEBRIDEMENT AND IRRIGATION LEFT LOWER LIMB	2	C	22-10-2022 12:30	T8	60	180	22	116.0	114.0	112.0	114.0	116.0	96.0	98.0	94.0	94.0	92.0	94.0	92.0	96.0	98.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
202	SK	1358972	37	M	175	60	19.6	FUCO ORIF RIGHT PATELLA WITH WOUND DEHISCENCE	DEBRIDEMENT AND WOUND CLOSURE	2	B	25-10-2022 11:00	T8	60	150	22	88.0	94.0	92.0	94.0	90.0	92.0	90.0	84.0	84.0	86.0	84.0	88.0	86.0	88.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
203	RK	1400370	34	M	170	85	29.4	RIGHT ANKLE LIGAMENTUM INJURYYYY WITH SOFT TISSUE REPAIR	DEBRIDEMENT AND IRRIGATION OF WOUND	2	C	25-10-2022 13:00	T10	60	150	22	92.0	99.0	96.0	98.0	96.0	90.0	90.0	86.0	88.0	86.0	88.0	82.0	86.0	82.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
204	NS	1403173	50	M	174	54	17.8	FRACTURE BB LEG RIGHT	ORIF	2	A	27-10-2022 14:00	T8	90	170	23	104.0	100.0	100.0	98.0	86.0	82.0	80.0	76.0	78.0	80.0	70.0	72.0	78.0	73.0	80.0	82	86	82	76	82	-	-	-	-	-	-	-	-	-	-
205	RD	260832	29	F	155	72	30.0	AVULSION OF RIGHT ACL	ARTHROSCOPIC ACL REPAIR	1	A	28-10-2022 14:00	T10	90	160	21	110.0	102.0	100.0	102.0	103.0	92.0	92.0	98.0	96.0	92.0	98.0	96.0	96.0	98.0	92.0	90	92	90	88	86	-	-	-	-	-	-	-	-	-	-
206	HS	1395933	56	M	170	72	24.9	FUCO FRACTURE BB LEG RIGHT SIDE WITH METAL WORK IN SITU	SPLIT SKIN GRAFTING	2	C	28-10-2022 15:00	T10	60	170	22	96.0	90.0	82.0	76.0	74.0	80.0	72.0	70.0	66.0	68.0	68.0	64.0	70.0	72.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207	S	264600	41	M	168	65	23.0	CLOSED FRACTURE BB LEG RIGHT SIDE	ORIF	1	B	29-10-2022 10:00	T8	90	160	22	88.0	90.0	86.0	88.0	90.0	92.0	90.0	91.0	89.0	88.0	86.0	88.0	90.0	84.0	86.0	102	100	102	97	96	-	-	-	-	-	-	-	-	-	-
208	SK	301755	45	M	171	100	34.2	FUCO DEBRIDEMENT OF LEFT FOOT	SPLIT SKIN GRAFTING	2	C	29-10-2022 13:00	T10	60	170	22	68.0	74.0	70.0	72.0	68.0	66.0	68.0	64.0	68.0	62.0	66.0	62.0	70.0	72.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
209	GS	1404611	46	M	175	90	29.4	FRACTURE RIGHT FEMUR	CRIF FEMUR RIGHT	1	B	29-10-2022 14:00	T8	90	180	22	82.0	78.0	76.0	70.0	69.0	65.0	63.0	60.0	59.0	57.0	53.0	51.0	49.0	99.0	89.0	74	70	72	74	76	-	-	-	-	-	-	-	-	-	-
210	bp	1428525	52	M	173	83	27.7	proximal left tibia fracture	orif	2	C	10-01-2023	T8	120	180	21	80.0	80.0	78.0	76.0	74.0	70.0	68.0	70.0	72.0	74.0	70.0	68.0	66.0	68.0	68.0	96	99	96	106	101	98	106	96	98	102	101	-	-

S.no	HR 135	HR 140	HR 145	HR 150	AFTER SHIFTING TO PACU HR 0	PACU HR 30	PACU HR 60	PACU HR 90	PACU HR 120	PACU HR 150	PACU HR 180	PACU HR 210	PACU HR 240	PACU HR 270	PACU HR 300	PACU HR 330	PACU HR 360	SBP Base line	SBP 0	SBP 5	SBP 10	SBP 15	SBP 20	SBP 25	SBP 30	SBP 35	SBP 40	SBP 45	SBP 50	SBP 55	SBP 60	SBP 65	SBP 70	SBP 75	SBP 80	SBP 85	SBP 90	SBP 95	SBP 100	SBP 105	SBP 110	SBP 115	SBP 120	SBP 125	SBP 130	SBP 135	SBP 140	SBP 145
166	88	-	-	-	88	82	89	94	82	82	86	82	92	88	82	86	86	130	132	128	126	120	126	121	124	112	111	122	126	122	128	121	124	124	112	111	122	126	122	128	121	124	124	112	111	122	-	-
167	-	-	-	-	92	77	88	86	77	77	76	77	77	75	77	90	76	126	117	108	110	111	111	110	112	100	110	100	100	100	100	110	100	112	100	110	100	100	100	100	110	100	112	100	-	-	-	-
168	-	-	-	-	61	56	59	57	56	56	54	56	56	54	56	60	54	170	160	158	140	132	136	134	132	138	132	140	144	148	150	144	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
169	-	-	-	-	66	64	62	61	64	64	64	64	62	62	64	66	64	110	112	106	100	102	100	110	112	110	111	114	116	112	116	100	112	100	110	111	114	116	112	116	100	112	100	-	-	-	-	-
170	-	-	-	-	74	74	72	71	74	74	73	74	66	70	74	75	73	180	148	146	145	142	140	141	142	145	146	146	150	152	153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171	-	-	-	-	92	88	88	86	88	88	86	88	84	87	88	92	86	110	112	113	115	115	116	116	114	112	110	108	105	100	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
172	-	-	-	-	76	80	80	84	80	80	76	80	68	74	80	74	76	122	132	128	130	122	121	132	128	136	132	131	134	132	138	132	126	128	136	132	131	-	-	-	-	-	-	-	-	-	-	-
173	-	-	-	-	70	66	70	68	66	66	70	66	74	72	66	74	70	122	120	110	90	104	106	110	112	122	120	126	120	118	124	122	120	112	122	120	126	120	118	124	122	120	112	-	-	-	-	-
174	-	-	-	-	70	68	68	64	68	68	66	68	66	70	68	72	66	130	136	122	106	120	116	122	120	126	124	122	120	124	106	128	122	120	126	124	122	120	124	106	128	122	120	-	-	-	-	-
175	-	-	-	-	116	95	113	98	95	95	94	95	96	94	95	115	94	126	122	100	110	116	120	122	124	120	122	114	112	116	112	114	120	124	120	122	114	-	-	-	-	-	-	-	-	-	-	-
176	-	-	-	-	100	99	104	100	99	99	96	99	100	99	99	102	96	132	134	128	122	120	110	112	116	110	118	110	116	120	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
177	-	-	-	-	80	90	82	86	90	90	88	90	80	86	90	84	88	164	160	158	142	125	138	140	156	158	166	164	162	150	158	150	162	156	158	166	164	-	-	-	-	-	-	-	-	-	-	-
178	-	-	-	-	94	92	94	96	92	92	90	92	83	93	92	98	90	120	122	104	100	100	104	106	110	112	110	124	122	126	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
179	-	-	-	-	70	62	70	68	62	62	66	62	64	72	62	72	66	120	102	100	90	102	104	106	110	116	118	120	118	112	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	106	98	102	98	98	98	102	98	96	102	98	100	102	116	118	116	112	110	102	106	110	112	110	108	116	102	106	110	112	110	112	110	108	116	102	106	110	112	110	-	-	-	-	-
181	-	-	-	-	90	92	96	90	92	92	94	92	86	90	92	94	94	120	120	118	117	116	114	113	112	110	110	109	108	107	110	114	118	112	110	110	109	108	107	110	114	118	112	-	-	-	-	-
182	-	-	-	-	107	88	96	94	88	88	84	88	80	86	88	97	84	148	142	130	128	122	120	120	122	136	128	122	120	120	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
183	-	-	-	-	88	94	96	99	94	94	90	94	82	88	94	94	90	140	140	138	136	135	132	130	128	125	129	130	134	136	137	140	140	128	125	129	130	-	-	-	-	-	-	-	-	-	-	-
184	-	-	-	-	110	94	97	96	94	94	88	94	82	84	94	106	88	130	132	130	128	114	112	110	112	114	116	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
185	-	-	-	-	70	80	65	78	80	80	78	80	72	86	80	69	78	110	112	116	120	125	127	130	130	128	126	125	130	132	138	140	140	130	128	126	125	-	-	-	-	-	-	-	-	-	-	-
186	-	-	-	-	88	90	92	96	90	90	88	90	82	86	90	90	88	144	130	124	110	134	136	130	134	136	140	141	145	146	148	149	150	134	136	140	141	145	146	148	149	150	134	-	-	-	-	-
187	-	-	-	-	104	98	102	106	98	98	92	98	90	96	98	102	92	140	142	138	132	128	136	140	152	150	148	142	140	138	135	136	140	152	150	148	142	-	-	-	-	-	-	-	-	-	-	-
188	-	-	-	-	72	64	68	66	64	64	66	64	72	65	64	70	66	126	120	97	116	112	116	112	114	110	104	102	106	108	110	112	110	114	110	104	102	106	108	110	112	110	114	-	-	-	-	-
189	-	-	-	-	84	78	82	80	78	78	74	78	72	76	78	86	74	122	120	124	120	116	104	106	104	110	108	110	112	114	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	74	58	60	62	58	58	55	58	56	56	58	68	55	170	168	139	164	162	160	158	156	160	162	160	158	156	150	156	160	156	160	162	160	158	156	150	156	160	156	-	-	-	-	-
191	-	-	-	-	96	94	90	96	94	94	92	94	90	94	94	99	92	138	132	130	128	120	124	122	120	124	128	120	112	116	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
192	-	-	-	-	88	88	88	90	88	88	86	88	80	82	88	86	86	120	120	118	106	110	112	120	122	126	124	122	120	124	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
193	-	-	-	-	96	76	89	80	76	76	82	76	82	88	76	89	82	138	130	128	120	122	120	124	126	128	120	124	118	116	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
194	-	-	-	-	96	88	90	99	88	88	86	88	90	90	88	92	86	140	138	136	122	120	124	122	126	124	122	120	124	122	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
195	-	-	-	-	80	82	89	94	82	82	86	82	92	88	82	86	86	124	122	90	114	112	128	126	120	124	126	120	128	120	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
196	-	-	-	-	99	97	100	101	97	97	96	97	102	98	97	102	96	128	122	117	100	120	126	134	110	120	122	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
197	-	-	-	-	77	78	77	79	78	78	79	78	81	80	78	78	79	196	140	142	140	138	136	140	132	140	142	140	136	132	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198	-	-	-	-	108	102	102	104	102	102	102	102	98	104	102	106	102	170	164	158	160	142	140	146	150	146	150	152	150	152	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
199	-	-	-	-	96	106	102	101	106	106	101	106	96	98	106	98	101	110	112	88	102	106	110	100	114	118	120	122	124	122	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	80	85	87	86	85	85	85	85	84	84	85	87	85	180	160	154	152	156	154	152	150	152	154	150	150	162	158	150	152	154	150	154	150	150	162	158	150	162	152	-	-	-	-	-
201	-	-	-	-	74	70.0	60	62	58	58	63.0	63.0	65.0	66.0	60	68	67.0	122	120	89	116	100	102	106	104	100	112	100	116	120	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
202	-	-	-	-	96	88.0	90	96	94	94	86.0	90.0	84.0	88.0	94	99	86.0	140	142	132	120	126	110	126	130	132	128	130	132	134	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
203	-	-	-	-	88	82.0	88	90	88	88	86.0	90.0	88.0	82.0	88	86	86.0	160	158	154	112	126	130	142	136	140	148	150	152	156	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
204	-	-	-	-	96	72.0	89	80	76	76	78.0	80.0	70.0	73.0	76	89	78.0	120	120	112	108	110	112	110	106	110	112	110	115	118	122	121	116	106	110	112	110	-	-	-	-	-	-	-	-	-	-	-	-
205	-	-	-	-	96	96.0	90	99	88	88	96.0	92.0	98.0	98.0	88	92	96.0	110	112	106	104	106	110	114	118	116	118	120	118	116	116	116	120	118	116	118	120	-	-	-	-	-	-	-	-	-	-	-	-
206	-	-	-	-	80	64.0	89	94	82	82	70.0	72.0	68.0	72.0	82	86	70.0	124	122	90	115	106	110	112	118	120	122	124	120	122	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207	-	-	-	-	99	88.0	100	101	97	97	90.0	90.0	86.0	84.0	97	102	90.0	138	136	132	130	128	130	122	120	118	122	116	114	114	110	126	120	120	118	122	116	-	-	-	-	-	-	-	-	-	-	-	-
208	-	-	-	-	77	70.0	77	79	78	78	70.0	68.0	66.0	72.0	78	78	70.0	158	154	148	146	146	140	136	134	132	130	138	136	138	136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
209	-	-	-	-	108	90.0	97	84	72	80	77.0	76.0	74.0	80.0	90	74	68.0	148	146	148	142	140	142	140	138	136	134	136	138	132	130	136	132	138	136	134	136	-	-	-	-	-	-	-	-	-	-	-	-
210	-	-	-	-	96	68.0	102	101	106	106	66.0	68.0	70.0	68.0	106	98	66.0	158	150	152	156	148	146	152	156	144	141	146	148	146	150	146	148	156	144	141	146	148	146	150	146	148	156	-	-	-	-	-

S.no	SBP 150	PACU SBP 00	PACU SBP 30	PACU SBP 60	PACU SBP 90	PACU SBP 120	PACU SBP 150	PACU SBP 180	PACU SBP 210	PACU SBP 240	PACU SBP 270	PACU SBP 300	PACU SBP 330	PACU SBP 360	DBP Base line	DBP 0	DBP 5	DBP 10	DBP 15	DBP 20	DBP 25	DBP 30	DBP 35	DBP 40	DBP 45	DBP 50	DBP 55	DBP 60	DBP 65	DBP 70	DBP 75	DBP 80	DBP 85	DBP 90	DBP 95	DBP 100	DBP 105	DBP 110	DBP 115	DBP 120	DBP 125	DBP 130	DBP 135	DBP 140	DBP 145	DBP 150
166	-	124.0	112.0	111.0	122.0	126.0	122.0	128.0	120	126	121	124	112	111	80.0	84.0	82.0	86.0	80.0	80.0	81.0	84.0	76.0	78.0	80.0	74.0	76.0	78.0	82	86	80	81	84	76	78.0	80.0	74.0	76.0	78.0	82	86	80	-	-	-
167	-	112.0	100.0	110.0	100.0	100.0	100.0	100.0	111	111	110	112	100	110	82.0	66.0	57.0	66.0	68.0	66.0	62.0	70.0	56.0	64.0	53.0	58.0	56.0	54.0	57	66	68	66	62	70	56	64.0	53.0	58.0	56.0	54.0	57	-	-	-	-	-
168	-	132.0	138.0	132.0	140.0	144.0	148.0	150.0	132	136	134	132	138	132	100.0	98.0	90.0	80.0	68.0	74.0	90.0	86.0	100.0	98.0	98.0	98.0	100.0	98.0	90	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
169	-	112.0	110.0	111.0	114.0	116.0	112.0	116.0	102	100	110	112	110	111	70.0	78.0	72.0	58.0	56.0	72.0	71.0	86.0	73.0	78.0	60.0	68.0	54.0	62.0	72	58	56	72	71	86	73	78.0	60.0	68.0	54.0	62.0	-	-	-	-	-	-
170	-	142.0	145.0	146.0	146.0	150.0	152.0	153.0	142	140	141	142	145	146	90.0	90.0	88.0	86.0	84.0	82.0	81.0	82.0	83.0	84.0	86.0	90.0	92.0	90.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
171	-	114.0	112.0	110.0	108.0	105.0	100.0	105.0	115	116	116	114	112	110	70.0	72.0	73.0	75.0	77.0	78.0	77.0	75.0	74.0	70.0	68.0	64.0	60.0	65.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
172	-	128.0	136.0	132.0	131.0	134.0	132.0	138.0	122	121	132	128	136	132	86.0	78.0	66.0	72.0	71.0	64.0	88.0	72.0	88.0	98.0	86.0	82.0	88.0	86.0	66	72	71	64	88	72	-	-	-	-	-	-	-	-	-	-	-	-
173	-	112.0	122.0	120.0	126.0	120.0	118.0	124.0	104	106	110	112	122	120	84.0	82.0	76.0	66.0	54.0	60.0	74.0	80.0	82.0	78.0	80.0	86.0	82.0	74.0	76	66	54	60	74	80	82	78.0	80.0	86.0	82.0	74.0	-	-	-	-	-	-
174	-	120.0	126.0	124.0	122.0	120.0	124.0	106.0	120	116	122	120	126	124	80.0	88.0	80.0	84.0	82.0	80.0	76.0	74.0	72.0	74.0	76.0	78.0	80.0	82.0	80	84	82	80	76	74	72	74.0	76.0	78.0	80.0	82.0	-	-	-	-	-	-
175	-	124.0	120.0	122.0	114.0	112.0	116.0	112.0	116	120	122	124	120	122	84.0	74.0	68.0	68.0	66.0	74.0	72.0	70.0	84.0	80.0	78.0	76.0	74.0	80.0	68	68	66	74	72	70	-	-	-	-	-	-	-	-	-	-	-	-
176	-	116.0	110.0	118.0	110.0	116.0	120.0	122.0	120	110	112	116	110	118	84.0	74.0	76.0	70.0	68.0	54.0	62.0	66.0	68.0	68.0	66.0	66.0	70.0	70.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
177	-	156.0	158.0	166.0	164.0	162.0	150.0	158.0	132	138	140	156	158	166	98.0	100.0	98.0	92.0	80.0	74.0	90.0	70.0	92.0	98.0	92.0	94.0	92.0	96.0	90	92	88	80	86	80	-	-	-	-	-	-	-	-	-	-	-	-
178	-	110.0	112.0	110.0	124.0	122.0	126.0	124.0	100	104	106	110	112	110	86.0	68.0	70.0	54.0	66.0	62.0	60.0	70.0	72.0	70.0	78.0	64.0	90.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
179	-	110.0	116.0	118.0	120.0	118.0	112.0	116.0	102	104	106	110	116	118	84.0	70.0	68.0	60.0	64.0	62.0	70.0	68.0	74.0	72.0	78.0	80.0	82.0	84.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180	-	110.0	112.0	110.0	108.0	116.0	102.0	106.0	110	102	106	110	112	110	78.0	74.0	72.0	74.0	70.0	68.0	64.0	70.0	72.0	74.0	74.0	72.0	70.0	76.0	72	74	70	68	64	70	72	74.0	74.0	72.0	70.0	76.0	-	-	-	-	-	-
181	-	112.0	110.0	110.0	109.0	108.0	107.0	110.0	116	114	113	112	110	110	84.0	82.0	80.0	80.0	79.0	78.0	78.0	76.0	74.0	73.0	72.0	70.0	69.0	70.0	80	80	79	78	78	76	74	73.0	72.0	70.0	69.0	70.0	-	-	-	-	-	-
182	-	122.0	136.0	128.0	122.0	120.0	120.0	126.0	122	120	120	122	136	128	88.0	80.0	76.0	72.0	68.0	60.0	64.0	66.0	70.0	74.0	72.0	78.0	80.0	80.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
183	-	128.0	125.0	129.0	130.0	134.0	136.0	137.0	135	132	130	128	125	129	92.0	90.0	88.0	87.0	85.0	82.0	80.0	77.0	74.0	79.0	82.0	85.0	87.0	90.0	88	87	85	82	80	77	-	-	-	-	-	-	-	-	-	-	-	-
184	-	112.0	114.0	116.0	114.0	112.0	110.0	116.0	114	112	110	112	114	116	80.0	98.0	98.0	88.0	90.0	86.0	82.0	84.0	82.0	80.0	86.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
185	-	130.0	128.0	126.0	125.0	130.0	132.0	138.0	125	127	130	130	128	126	80.0	82.0	84.0	85.0	87.0	90.0	92.0	94.0	90.0	88.0	90.0	88.0	90.0	91.0	84	85	87	90	92	94	-	-	-	-	-	-	-	-	-	-	-	-
186	-	134.0	136.0	140.0	141.0	145.0	146.0	148.0	140	136	130	134	136	140	86.0	100.0	88.0	70.0	74.0	70.0	68.0	70.0	72.0	73.0	74.0	78.0	79.0	81.0	88	70	74	70	68	70	72	73.0	74.0	78.0	79.0	81.0	-	-	-	-	-	-
187	-	152.0	150.0	148.0	142.0	140.0	138.0	135.0	128	136	140	152	150	148	80.0	86.0	80.0	81.0	66.0	72.0	70.0	80.0	78.0	78.0	86.0	80.0	78.0	75.0	80	81	66	72	70	80	-	-	-	-	-	-	-	-	-	-	-	-
188	-	114.0	110.0	104.0	102.0	106.0	108.0	110.0	112	116	112	114	110	104	82.0	84.0	74.0	70.0	70.0	64.0	66.0	64.0	62.0	58.0	60.0	66.0	62.0	64.0	74	70	70	64	66	64	62	58.0	60.0	66.0	62.0	64.0	-	-	-	-	-	-
189	-	104.0	110.0	108.0	110.0	112.0	114.0	116.0	116	104	106	104	110	108	86.0	82.0	82.0	80.0	78.0	74.0	72.0	62.0	54.0	56.0	60.0	62.0	64.0	68.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
190	-	156.0	160.0	162.0	160.0	158.0	156.0	150.0	162	160	158	156	160	162	98.0	100.0	92.0	80.0	88.0	98.0	100.0	96.0	98.0	100.0	98.0	92.0	94.0	96.0	92	80	88	98	100	96	98	100.0	98.0	92.0	94.0	96.0	-	-	-	-	-	-
191	-	120.0	124.0	128.0	120.0	112.0	116.0	120.0	120	124	122	120	124	128	86.0	98.0	74.0	76.0	66.0	80.0	76.0	84.0	82.0	88.0	86.0	82.0	84.0	82.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
192	-	122.0	126.0	124.0	122.0	120.0	124.0	122.0	110	112	120	122	126	124	76.0	70.0	68.0	54.0	68.0	72.0	68.0	70.0	74.0	78.0	80.0	82.0	80.0	80.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
193	-	126.0	128.0	120.0	124.0	118.0	116.0	112.0	122	120	124	126	128	120	68.0	70.0	64.0	62.0	68.0	62.0	58.0	64.0	62.0	68.0	66.0	70.0	72.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
194	-	126.0	124.0	122.0	120.0	124.0	122.0	122.0	120	124	122	126	124	122	98.0	100.0	98.0	84.0	76.0	70.0	74.0	82.0	88.0	84.0	80.0	84.0	82.0	76.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
195	-	120.0	124.0	126.0	120.0	128.0	120.0	116.0	112	128	126	120	124	126	70.0	68.0	62.0	54.0	60.0	72.0	74.0	72.0	78.0	80.0	80.0	84.0	86.0	84.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
196	-	110.0	120.0	122.0	116.0	120.0	112.0	126.0	120	126	134	110	120	122	88.0	80.0	84.0	82.0	86.0	80.0	88.0	90.0	96.0	94.0	86.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
197	-	132.0	140.0	142.0	140.0	136.0	132.0	134.0	138	136	140	132	140	142	82.0	74.0	72.0	70.0	72.0	74.0	78.0	72.0	70.0	74.0	76.0	72.0	68.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198	-	150.0	146.0	150.0	152.0	150.0	152.0	154.0	142	140	146	150	146	150	86.0	84.0	82.0	80.0	86.0	84.0	82.0	86.0	84.0	84.0	82.0	80.0	86.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
199	-	114.0	118.0	120.0	122.0	124.0	122.0	120.0	106	110	100	114	118	120	96.0	84.0	80.0	72.0	68.0	70.0	74.0	76.0	72.0	70.0	76.0	74.0	74.0	70.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200	-	150.0	152.0	154.0	150.0	150.0	162.0	158.0	156	154	152	150	152	154	100.0	98.0	96.0	92.0	74.0	76.0	78.0	80.0	84.0	88.0	84.0	86.0	88.0	90.0	96	92	74	76	78	80	84	88.0	84.0	86.0	88.0	90.0	-	-	-	-	-	-
201	-	104.0	100.0	112.0	100.0	116.0	120.0	116.0	100	102	106	104	100	112	76.0	72.0	68.0	66.0	64.0	62.0	64.0	68.0	72.0	74.0	72.0	78.0	76.0	74.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
202	-	130.0	132.0	128.0	130.0	132.0	134.0	128.0	126	110	126	130	132	128	100.0	98.0	80.0	76.0	72.0	68.0	70.0	74.0	74.0	78.0	76.0	80.0	84.0	88.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
203	-	136.0	140.0	148.0	150.0	152.0	156.0	140.0	146	130	142	136	140	148	100.0	90.0	96.0	84.0	72.0	68.0	70.0	72.0	74.0	78.0	76.0	80.0	82.0	84.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
204	-	106.0	110.0	112.0	110.0	115.0	118.0	122.0	110	112	110	106	110	112	74.0	71.0	68.0	64.0	88.0	70.0	72.0	70.0	70.0	68.0	70.0	72.0	74.0	70.0	68	64	88	70	72	70	-	-	-	-	-	-	-	-	-	-	-	-
205	-	118.0	116.0	118.0	120.0	118.0	116.0	116.0	106	110	114	118	116	118	74.0	70.0	68.0	62.0	70.0	68.0	76.0	74.0	70.0	72.0	70.0	74.0	70.0	76.0	68	62	70	68	76	74	-	-	-	-	-	-	-	-	-	-	-	-
206	-	118.0	120.0	122.0	124.0	120.0	122.0	124.0	106	110	112	118	120	122	70.0	74.0	68.0	64.0	68.0	70.0	70.0	72.0	74.0	72.0	74.0	78.0	80.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207	-	120.0	118.0	122.0	116.0	114.0	114.0	110.0	128	130	122	120	118	122	82.0	80.0	80.0	78.0	76.0	74.0	70.0	68.0	66.0	70.0	74.0	70.0	66.0	64.0	80	78	76	74	70	68	-	-	-	-	-	-	-	-	-	-	-	-
208	-	134.0	132.0	130.0	138.0	136.0	138.0	136.0	146	140	136	134	132	130	92.0	98.0	90.0	86.0	80.0	78.0	74.0	72.0	70.0	70.0	76.0	74.0	72.0	78.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
209	-	138.0	136.0	134.0	136.0	138.0	132.0	130.0	140	142	140	138	136	134	92.0	90.0	92.0	96.0	84.0	82.0	80.0	82.0	84.0	86.0	84.0	80.0	84.0	82.0	92	96	84	82	80	82	-	-	-	-	-	-	-	-	-	-	-	-
210	-	156.0	144.0	141.0	146.0	148.0	146.0	150.0	148	146	152	156	144	141	86.0	96.0	92.0	94.0	90.0	90.0	88.0	86.0	90.0	88.0	82.0	98.0	86.0	92.0	92	94	90	90	88	86	90	88.0	82.0	88.0	86.0	92.0	-	-	-	-	-	-

S.no	AFTER SHIFTING TO PACU DBP 00	PACU DBP 30	PACU DBP 60	PACU DBP 90	PACU DBP 120	PACU DBP 150	PACU DBP 180	PACU DBP 210	PACU DBP 240	PACU DBP 270	PACU DBP 300	PACU DBP 330	PACU DBP 360	MAP BASELINE	MAP 0 MIN IMMEDIATELY AFTER SPINAL	MAP 5MIN	MAP 10 MIN	MAP 15 MIN	MAP 20 MIN	MAP 25 MIN	MAP 30 MIN	MAP 35 MIN	MAP 40MIN	MAP 45MIN	MAP 50 MIN	MAP 55 MIN	MAP 60	MAP 65 MIN	MAP 70 MIN	MAP 75 MIN	MAP 80MIN	MAP 85MIN	MAP 90 MIN	MAP 95 MIN	MAP 100 MIN
166	86	80	80	86.0	80.0	80.0	81.0	84.0	76.0	81	84	76	74.0	118	100	97	99	93	95	94	97	88	89	94	91	91	95	95	99	95	91	91	97	93	93
167	66	68	66	66.0	68.0	66.0	62.0	70.0	56.0	62	70	56	58.0	118	83	74	81	82	81	78	84	71	79	69	72	71	69	75	77	83	77	78	80	71	76
168	80	68	74	80.0	68.0	74.0	90.0	86.0	100.0	90	86	100	98.0	152	119	113	100	89	95	105	101	113	109	112	113	116	115	108	103						
169	58	56	72	58.0	56.0	72.0	71.0	86.0	73.0	71	86	73	68.0	102	89	83	72	71	81	84	95	85	89	78	84	73	80	81	76	71	85	84	95	87	89
170	86	84	82	86.0	84.0	82.0	81.0	82.0	83.0	81	82	83	90.0	150	109	107	106	103	101	101	102	104	105	106	110	112	111								
171	75	77	78	75.0	77.0	78.0	77.0	75.0	74.0	77	75	74	64.0	102	85	86	88	90	91	90	88	87	83	81	78	73	78								
172	72	71	64	72.0	71.0	64.0	88.0	72.0	88.0	88	72	88	82.0	118	96	87	91	88	83	103	91	104	109	101	99	103	103	88	90	90	88	103	92		
173	66	54	60	66.0	54.0	60.0	74.0	80.0	82.0	74	80	82	86.0	117	95	87	74	71	75	86	91	95	92	95	97	94	91	91	84	73	81	89	95	95	91
174	84	82	80	84.0	82.0	80.0	76.0	74.0	72.0	76	74	72	78.0	118	104	94	91	95	92	91	89	90	91	91	92	95	90	96	97	95	95	92	90	88	91
175	68	66	74	68.0	66.0	74.0	72.0	70.0	84.0	72	70	84	76.0	119	90	79	82	83	89	89	88	96	94	90	88	88	91	83	85	85	89	89	85		
176	70	68	54	70.0	68.0	54.0	62.0	66.0	68.0	62	66	68	66.0	122	94	93	87	85	73	79	83	82	85	81	83	87	87								
177	92	80	74	92.0	80.0	74.0	90.0	100.0	92.0	90	100	92	94.0	147	120	118	109	95	95	107	99	114	121	116	117	111	117	110	115	111	106	113	108		
178	54	66	62	54.0	66.0	62.0	60.0	70.0	72.0	60	70	72	64.0	117	86	81	69	77	76	75	83	85	83	93	83	102	91								
179	60	64	62	60.0	64.0	62.0	70.0	68.0	74.0	70	68	74	80.0	116	81	79	70	77	76	82	82	88	87	92	93	92	95								
180	74	70	68	74.0	70.0	68.0	64.0	70.0	72.0	64	70	72	72.0	110	89	87	87	83	79	78	83	85	86	85	87	81	86	85	87	83	83	79	83	87	83
181	80	79	78	80.0	79.0	78.0	78.0	76.0	74.0	78	76	74	70.0	116	95	93	92	91	90	90	88	86	85	84	83	82	83	91	93	90	89	89	87	85	84
182	72	68	60	72.0	68.0	60.0	64.0	66.0	70.0	64	66	70	78.0	133	101	94	91	86	80	83	85	92	92	89	92	93	95								
183	87	85	82	87.0	85.0	82.0	80.0	77.0	74.0	80	77	74	85.0	131	107	105	103	102	99	97	94	91	96	98	101	103	106	105	105	99	96	96	95		
184	88	90	86	88.0	90.0	86.0	82.0	84.0	82.0	82	84	82	82.0	118	109	109	101	98	95	91	93	93	92	95											
185	85	87	90	85.0	87.0	90.0	92.0	94.0	90.0	92	94	90	88.0	108	92	95	97	100	102	105	106	103	101	102	102	104	107	103	103	101	103	103	104		
186	70	74	70	70.0	74.0	70.0	68.0	70.0	72.0	68	70	72	78.0	129	110	100	83	94	92	89	91	93	95	96	100	101	103	108	97	94	92	92	94	96	97
187	81	66	72	81.0	66.0	72.0	70.0	80.0	78.0	70	80	78	80.0	123	105	99	98	87	93	93	104	102	101	105	100	98	95	99	101	95	98	96	101		
188	70	70	64	70.0	70.0	64.0	66.0	64.0	62.0	66	64	62	66.0	118	96	82	85	84	81	81	81	78	73	74	79	77	79	87	83	85	79	79	77	77	75
189	80	78	74	80.0	78.0	74.0	72.0	62.0	54.0	72	62	54	62.0	118	95	96	93	91	84	83	76	73	73	77	79	81	84								
190	80	88	98	80.0	88.0	98.0	100.0	96.0	98.0	100	96	98	92.0	150	123	108	108	113	119	119	116	119	121	119	114	115	114	113	107	111	119	121	117	118	119
191	76	66	80	76.0	66.0	80.0	76.0	84.0	82.0	76	84	82	82.0	126	109	93	93	84	95	91	96	96	101	97	92	95	95								
192	54	68	72	54.0	68.0	72.0	68.0	70.0	74.0	68	70	74	82.0	111	87	85	71	82	85	85	87	91	93	94	95	95	94								
193	62	68	62	62.0	68.0	62.0	58.0	64.0	62.0	58	64	62	70.0	114	90	85	81	86	81	80	85	84	85	85	86	87	87								
194	84	76	70	84.0	76.0	70.0	74.0	82.0	88.0	74	82	88	84.0	135	113	111	97	91	88	90	97	100	97	93	97	95	91								
195	54	60	72	54.0	60.0	72.0	74.0	72.0	78.0	74	72	78	84.0	109	86	71	74	77	91	91	88	93	95	93	99	97	95								
196	82	86	80	82.0	86.0	80.0	88.0	90.0	96.0	88	90	96	88.0	123	94	95	88	97	95	103	97	104	103	96											
197	70	72	74	70.0	72.0	74.0	78.0	72.0	70.0	78	72	70	72.0	153	96	95	93	94	95	99	92	93	97	97	93	89	94								
198	80	86	84	80.0	86.0	84.0	82.0	86.0	84.0	82	86	84	80.0	142	111	107	107	105	103	103	107	105	106	105	103	108	103								
199	72	68	70	72.0	68.0	70.0	74.0	76.0	72.0	74	76	72	74.0	119	93	83	82	81	83	83	89	87	87	91	91	90	87								
200	92	74	76	92.0	74.0	76.0	78.0	80.0	84.0	78	80	84	86.0	157	119	115	112	101	102	103	103	107	110	106	107	113	113	114	112	101	101	103	103	106	113
201	66	64	62	66.0	64.0	62.0	64.0	68.0	72.0	64	68	72	78.0	112	88	75	83	76	75	78	80	81	87	81	91	91	88								
202	76	72	68	76.0	72.0	68.0	70.0	74.0	74.0	70	74	74	80.0	137	113	97	91	90	82	89	93	93	95	94	97	101	101								
203	84	72	68	84.0	72.0	68.0	70.0	72.0	74.0	70	72	74	80.0	147	113	115	93	90	89	94	93	96	101	101	104	107	103								
204	64	88	70	64.0	88.0	70.0	72.0	70.0	70.0	72	70	70	72.0	109	87	83	79	95	84	85	82	83	83	83	86	89	87	86	81	94	83	85	83		
205	62	70	68	62.0	70.0	68.0	76.0	74.0	70.0	76	74	70	74.0	104	84	81	76	82	82	89	89	85	87	87	89	85	89	84	81	86	84	90	89		
206	64	68	70	64.0	68.0	70.0	70.0	72.0	74.0	70	72	74	78.0	109	90	75	81	81	83	84	87	89	89	91	92	94	93								
207	78	76	74	78.0	76.0	74.0	70.0	68.0	66.0	70	68	66	70.0	124	99	97	95	93	93	87	85	83	87	88	85	82	79	95	92	91	89	87	84		
208	86	80	78	86.0	80.0	78.0	74.0	72.0	70.0	74	72	70	74.0	140	117	109	106	102	99	95	93	91	90	97	95	94	97								
209	96	84	82	96.0	84.0	82.0	80.0	82.0	84.0	80	82	84	80.0	135	109	111	111	103	102	100	101	101	102	101	99	100	98	107	108	102	100	98	100		
210	94	90	90	94.0	90.0	90.0	88.0	86.0	90.0	88	86	90	98.0	136	114	112	115	109	109	109	109	108	106	103	115	106	111	110	112	112	108	106	106	109	205

S.no	MAP 105 MIN	MAP 110 MIN	MAP 115MIN	MAP 120 MIN	MAP 125 MIN	MAP 130 MIN	MAP 135 MIN	MAP 140MIN	MAP 145 MIN	MAP 150 MIN	AFTER SHIFTING TO PACU MAP 00 MIN	PACU MAP 30 MIN	PACU MAP 60 MIN	PACU MAP 90 MIN	PACU MAP 120 MIN	PACU MAP 150 MIN	PACU MAP 180 MIN	PACU MAP 210	PACU MAP 240	PACU MAP 270	PACU MAP 300	PACU MAP 330	PACU MAP 360	RR Base line	RR 0	RR 5	RR 10	RR 15	RR 20	RR 25	RR 30	RR 35	RR 40	RR 45	RR 50	RR 55	RR 60	RR 65
166	96	90	92	93	92	94	94				99	91	90	98	95	94	97	96	93	94	97	88	86	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
167	69	75	71	73	71						81	79	81	77	79	77	75	84	74	78	84	71	75	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
168											97	91	93	100	93	99	110	101	112	105	101	113	109	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
169	79	79	73	75							76	74	85	77	76	85	86	91	82	84	95	85	82	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
170											105	104	103	106	106	105	105	102	102	101	102	104	109	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
171											88	89	89	86	86	85	86	88	88	90	88	87	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
172											91	93	87	92	92	87	105	89	99	103	91	104	99	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
173	95	98	95	87							81	77	80	86	76	79	91	88	90	86	91	95	97	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
174	86	95	94	95							96	97	95	97	95	95	86	89	87	91	89	90	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
175											87	84	90	83	81	88	85	85	96	89	88	96	91	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
176											85	82	75	83	84	76	82	84	82	79	83	82	83	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
177											113	106	105	116	107	99	113	111	107	107	119	114	118	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
178											73	81	78	77	85	83	81	80	83	75	83	85	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
179											77	81	81	80	82	79	85	79	84	82	82	88	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
180	85	85	84	87							86	84	82	85	85	79	78	83	82	78	83	85	85	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
181	85	85	85	84							91	89	89	90	89	88	89	89	87	90	88	86	83	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
182											89	91	83	89	85	80	85	85	87	83	85	92	95	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
183											101	98	98	101	101	100	99	96	93	97	94	91	100	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
184											96	98	96	97	97	94	93	94	92	91	93	93	93	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	
185											100	101	102	98	101	104	107	104	102	105	106	103	101	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
186	99	102	103	99							91	95	93	94	98	95	95	93	93	89	91	93	99	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
187											105	94	97	101	91	94	92	96	97	93	104	102	103	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
188	77	81	78	81							85	83	77	81	82	79	81	80	80	81	81	78	79	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
189											88	89	85	90	89	87	87	80	71	83	76	73	77	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
190	115	113	116	116							105	112	119	107	111	117	117	118	119	119	116	119	115	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
191											91	85	96	91	81	92	91	96	96	91	96	96	97	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
192											77	87	89	77	85	89	86	83	87	85	87	91	96	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-
193											83	88	81	83	85	80	76	83	81	80	85	84	87	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
194											98	92	87	96	92	87	90	95	100	90	97	100	97	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
195											76	81	90	76	83	88	88	85	95	91	88	93	98	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
196											91	97	94	93	97	91	101	100	106	103	97	104	99	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-
197											91	95	97	93	93	93	97	94	92	99	92	93	95	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
198											103	106	106	104	107	107	106	105	103	103	107	105	103	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
199											86	85	87	89	87	87	89	86	85	83	89	87	89	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
200	109	107	113	111							111	100	102	111	99	105	105	105	107	103	103	107	109	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
201											79	76	79	77	81	81	81	79	82	78	80	81	89	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
202											94	92	88	94	92	90	89	91	86	89	93	93	96	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-
203											101	95	95	106	99	97	93	97	93	94	93	96	103	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
204											78	95	84	79	97	86	89	83	84	85	82	83	85	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
205											81	85	85	81	86	84	89	85	83	89	89	85	89	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
206											82	85	87	84	85	87	88	83	86	84	87	89	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
207											92	90	90	91	89	87	83	88	87	87	85	83	87	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
208											102	97	95	103	99	98	95	97	93	95	93	91	93	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-
209											110	101	99	109	102	99	97	101	103	100	101	101	98	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
210	105	107	107	113							115	108	107	111	109	109	109	107	109	109	109	108	112	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

S.no	RR 70	RR 75	RR 80	RR 85	RR 90	RR 95	RR 100	RR 105	RR 110	RR 115	RR 120	RR 125	RR 130	RR 135	RR 140	RR 145	RR 150	PACU RR 00 MIN	PACURR 30 MIN	PACU RR 60	PACU RR 90	PACU RR 120 MIN	PACU RR 150 MIN	PACU RR 180 MIN	PACU RR 210 MIN	PACURR 240MIN	PACU RR 270	PACU RR 300	PACU RR 330 MIN	PACURR 360 MIN	SPO2 Base line	SPO2 00	SPO2 05	SPO2 10	SPO2 15	SPO2 20	SPO2 25	SPO2 30	SPO2 35	SPO2 40	SPO2 45	SPO2 50	SPO2 55	SPO2 60	SPO2 65	SPO2 70	SPO2 75	SPO2 80	SPO2 85	SPO2 90
166	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.0	18.0	18.0	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
167	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	97.0	97.0	96.0	96.0	97.0	97.0	97.0	97.0	96.0	96.0	96.0	98.0	98.0	98.0	100.0	97.0	96.0	96.0	97.0
168	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	95.0	98.0	98.0	98.0	99.0	98.0	99.0	98.0	100.0	98.0	96.0	98.0	95.0	96.0	95.0	98.0	-	-	-	-
169	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	-	-	-	-	-	-	-
171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	-	-	-	-	-	-	-
172	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	100.0	100.0	98.0	99.0	100.0	100.0	100.0	99.0	98.0	98.0	98.0	99.0	100.0	98.0	96.0	98.0	98.0	99.0	100.0
173	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	100.0	100.0	99.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	98.0	99.0	100.0	100.0	99.0
174	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	97.0	97.0	97.0	98.0	96.0	97.0	96.0	98.0	98.0	98.0	98.0	98.0	99.0	98.0	97.0	98.0	98.0	98.0	96.0	97.0
175	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0
176	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	98.0	96.0	98.0	96.0	98.0	98.0	99.0	98.0	99.0	98.0	98.0	-	-	-	-	-	-
177	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	96.0	96.0	98.0	98.0	96.0	98.0	98.0	99.0	98.0	99.0	98.0	96.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0
178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	100.0	100.0	99.0	100.0	100.0	99.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	-	-	-	-	-	-
179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-
180	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	96.0	96.0	99.0	98.0	96.0	98.0	98.0	98.0	99.0	99.0	100.0	100.0	99.0	98.0	98.0	99.0	99.0	98.0	96.0
181	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-
183	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	100.0	99.0	99.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-
185	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
186	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
187	19.0	19.0	19.0	19.0	19.0	-	-	-	-	-	-	-	-	-	-	-	-	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
188	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0
189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-
190	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	96.0	96.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
191	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-
192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-
193	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	100.0	100.0	98.0	100.0	100.0	98.0	99.0	100.0	98.0	99.0	99.0	99.0	100.0	-	-	-	-	-	-	-
194	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	99.0	99.0	99.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	-	-	-	-	-	-	-
195	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-
196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-
197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-
198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	98.0	100.0	100.0	100.0	100.0	100.0	99.0	98.0	99.0	100.0	99.0	100.0	100.0	100.0	-	-	-	-	-	-	-
199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-
200	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0
201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	-
202	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-
203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	100.0	-	-	-	-	-	-	-
204	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	99.0	99.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	99.0	100.0	100.0	100.0	99.0
205	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0
206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	98.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
207	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	99.0	99.0	99.0	98.0	98.0	99.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	-
209	20.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	-	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	94.0	96.0	96.0	96.0	96.0	96.0	98.0	98.0	96.0	96.0	98.0	98.0	98.0	96.0	94.0	96.0	98.0	96.0	96.0	96.0
210	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	96.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0

S.no	SPO2 95	SPO2 100	SPO2 105	SPO2 110	SPO2 115	SPO2 120	SPO2 125	SPO2 130	SPO2 135	SPO2 140	SPO2 145	SPO2 150	AFTER SHIFTING TO PACU SPO2 00	PACU SPO2 30	PACU SPO2 60	PACU SPO2 90	PACU SPO2 120	PACU SPO2 150	PACU SPO2 180	PACU SPO2 210	PACU SPO2 240	PACU SPO2 270	PACU SPO2 300	PACU SPO2 330	PACU SPO2 360	TEMPERATURE FOREHEAD Base line	TEMPERATURE forehead 0 MIN	TemP forehead 30 MIN	TemP forehead 60 MIN	TemP forehead 90 MIN	TemP forehead 120 MIN	TemP forehead 150 MIN	TemP forehead 180 MIN	TemP forehead 210	TemP forehead 240	TemP forehead 270	TemP forehead 300
166	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.2	97.4	96.9	97.5	97.1	97.1	97.0	96.4	96.5	97.0	96.8	96.6
167	97.0	97.0	97.0	96.0	96.0	96.0	98.0	-	-	-	-	-	96.0	97.0	97.0	97.0	97.0	96.0	96.0	97.0	97.0	97.0	97.0	96.0	96.0	96.5	98.6	97.6	97.6	97.8	97.7	97.8	97.5	96.8	97.4	96.6	97.1
168	-	-	-	-	-	-	-	-	-	-	-	-	99.0	98.0	99.0	98.0	100.0	98.0	96.0	98.0	99.0	98.0	100.0	98.0	96.0	96.5	96.9	97.1	97.4	97.0	97.1	96.8	96.6	96.8	96.9	97.0	97.0
169	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.8	96.9	97.0	97.0	97.1	96.8	96.5	95.6	95.4	96.6	95.2	95.4
170	-	-	-	-	-	-	-	-	-	-	-	-	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	97.1	97.4	97.5	97.7	97.9	97.6	97.2	96.9	96.8	96.5	96.7	96.8
171	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	97.1	97.0	96.9	96.7	96.5	96.2	96.4	96.5	96.8	96.9	97.0	97.1
172	-	-	-	-	-	-	-	-	-	-	-	-	99.0	100.0	100.0	100.0	99.0	98.0	98.0	100.0	100.0	100.0	99.0	98.0	98.0	98.2	98.4	98.0	97.9	98.0	97.4	97.8	96.9	97.2	96.5	96.0	96.5
173	100.0	99.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	99.0	100.0	99.0	100.0	100.0	100.0	99.0	100.0	99.0	100.0	100.0	100.0	97.9	97.4	97.8	97.4	96.9	97.2	96.5	96.9	96.8	96.5	96.0	96.5
174	96.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	96.0	97.0	96.0	98.0	98.0	98.0	98.0	97.0	96.0	98.0	98.0	98.0	98.0	96.5	96.4	96.1	96.0	97.2	97.0	96.8	97.1	97.0	96.9	96.5	97.0
175	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.8	96.9	95.4	97.7	97.8	97.5	96.8	97.4	96.6	97.1	97.4	97.6
176	-	-	-	-	-	-	-	-	-	-	-	-	96.0	98.0	96.0	98.0	98.0	99.0	98.0	98.0	96.0	98.0	98.0	99.0	98.0	97.4	98.0	97.5	97.5	97.4	97.5	96.9	96.8	96.7	96.6	96.4	96.1
177	-	-	-	-	-	-	-	-	-	-	-	-	98.0	96.0	98.0	98.0	99.0	98.0	99.0	96.0	98.0	98.0	99.0	98.0	99.0	98.0	98.2	98.4	97.9	97.9	98.0	97.8	97.4	96.9	97.2	96.5	96.0
178	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	99.0	100.0	100.0	99.0	99.0	100.0	99.0	100.0	100.0	99.0	99.0	97.6	98.0	97.5	97.6	97.5	97.6	96.9	96.8	96.7	96.4	96.7	96.4
179	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	96.9	96.0	96.4	96.8	96.9	96.9	97.0	97.1	97.2	97.2	97.3
180	98.0	98.0	98.0	99.0	99.0	100.0	-	-	-	-	-	-	98.0	96.0	98.0	98.0	98.0	99.0	99.0	96.0	98.0	98.0	98.0	99.0	99.0	96.9	97.0	97.1	97.0	97.1	96.8	96.8	96.6	96.8	96.9	97.0	97.2
181	99.0	99.0	99.0	99.0	99.0	99.0	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	97.1	97.0	96.9	96.7	96.4	96.4	96.2	96.0	96.5	96.7	96.8	96.9
182	-	-	-	-	-	-	-	-	-	-	-	-	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	98.1	98.2	98.4	97.9	97.4	98.1	97.5	97.0	97.0	97.1	96.9	96.8
183	-	-	-	-	-	-	-	-	-	-	-	-	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.1	97.0	96.9	96.7	96.5	96.4	96.7	96.7	96.9	97.1	97.0	97.2
184	-	-	-	-	-	-	-	-	-	-	-	-	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	96.9	97.1	95.9	96.5	97.1	96.8	96.8	96.6	96.8	96.9	97.1	97.2
185	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	97.1	97.4	97.2	96.9	96.9	96.7	96.8	96.6	96.5	96.4	96.2	96.5
186	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.1	97.4	97.2	97.2	97.3	96.9	96.7	96.5	96.2	96.2	96.7	96.8
187	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.1	97.4	96.9	96.7	96.4	96.2	96.0	95.9	96.2	96.2	96.4	96.5
188	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.2	97.0	96.9	97.1	97.0	97.1	96.9	96.8	96.1	96.6	96.0	95.4
189	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.4	97.1	96.9	97.5	97.0	97.0	96.4	96.5	97.0	96.8	96.6	96.1
190	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	96.0	98.0	96.0	98.0	98.0	98.0	98.0	98.0	96.0	98.0	98.0	98.0	98.0	97.4	94.6	96.1	97.0	96.9	96.5	96.8	96.5	96.1	95.8	95.7	96.0
191	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	97.4	97.5	97.0	97.1	96.9	96.5	96.8	96.6	96.6	96.1	96.2	95.8
192	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.9	96.8	96.8	96.5	96.5	96.4	96.4	96.5	96.1	96.4	96.4	95.7
193	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	98.0	99.0	100.0	98.0	99.0	100.0	98.0	99.0	100.0	98.0	99.0	98.0	98.1	98.4	97.9	97.4	98.1	97.5	97.0	97.1	96.9	96.8	96.9
194	-	-	-	-	-	-	-	-	-	-	-	-	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	98.4	98.1	96.4	97.4	98.0	97.5	97.0	97.1	96.9	96.8	96.9	97.1
195	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	98.1	97.9	97.4	97.2	97.0	96.9	96.9	97.4	97.1	97.0	96.8	96.6
196	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	97.2	97.1	97.1	97.0	97.2	96.9	96.8	96.6	97.4	97.1	96.8
197	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.5	98.6	97.6	97.9	97.6	97.8	96.9	95.8	96.8	96.9	96.9	94.8
198	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	99.0	98.0	99.0	100.0	99.0	100.0	99.0	98.0	99.0	100.0	99.0	96.9	97.6	97.2	97.0	97.4	96.8	96.6	96.6	96.8	96.9	97.0	97.5
199	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	97.0	96.9	97.1	96.9	97.4	97.2	97.4	97.0	96.8	96.9	96.6	96.8
200	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.8	97.0	97.1	96.9	96.8	96.9	96.9	96.8	97.0	96.9	96.8	96.6
201	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	95.9	95.8	95.9	96.8	96.9	96.8	96.6	96.6	96.5	96.5	96.6	96.4
202	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.6	97.0	97.1	96.9	96.8	96.9	96.8	96.1	95.9	96.8	96.8	96.4
203	-	-	-	-	-	-	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.1	97.8	97.6	97.0	96.8	96.6	96.8	96.5	96.4	96.2	96.0	95.8
204	-	-	-	-	-	-	-	-	-	-	-	-	100.0	99.0	100.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	96.4	97.8	98.0	98.1	97.9	97.6	97.8	96.9	96.8	96.7	96.8	96.9
205	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	96.8	97.1	96.9	96.8	96.8	97.0	96.4	96.3	96.2	96.4	96.6
206	-	-	-	-	-	-	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	97.6	97.4	97.2	97.0	96.8	96.6	96.4	96.0	96.1	96.8	96.4
207	-	-	-	-	-	-	-	-	-	-	-	-	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	96.9	96.7	97.0	97.2	97.4	96.9	96.8	96.6	96.1	96.0	96.8	96.4
208	-	-	-	-	-	-	-	-	-	-	-	-	98.0	99.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.6	96.7	95.3	97.8	97.3	96.8	97.1	97.0	97.3	97.2	97.1	97.4
209	-	-	-	-	-	-	-	-	-	-	-	-	96.0	96.0	98.0	98.0	96.0	96.0	98.0	96.0	98.0	98.0	96.0	96.0	98.0	97.9	97.6	97.4	98.0	98.4	97.3	96.8	97.0	97.1	97.3	97.2	97.0
210	98.0	98.0	98.0	98.0	98.0	98.0	-	-	-	-	-	-	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	96.8	96.1	96.0	95.9	95.8	95.9	96.0	96.2	96.4	96.2	96.6	96.8

S.no	TemP forehead 330	TemP forehead 360	Temp tympanic memb Base line	Temp tympanic memb 0	Temp tympanic memb 30	Temp tympanic memb 60	Temp tympanic memb 90	Temp tympanic memb 120	Temp tympanic memb 150	Temp tympanic memb 180	Temp tympanic memb 210	Temp tympanic memb 240	Temp tympanic memb 270	Temp tympanic memb 300	Temp tympanic memb 330	Temp tympanic memb 360	Rescue drug Tramadol	Onset of shivering	Cessation of shivering	Bradycardia	Hypotension	Nausea vomiting	Dizziness/ sedation	Shivering	Grading of shivering as per Wrench Grade 0	Wrench Grade 1	Wrench Grade 2	Wrench Grade 3	Wrench Grade 4	MOSS/A SCORE 6	MOSS/A SCORE 5	MOSS/A SCORE 4	MOSS/A GRADE 3	MOSS/A GRADE 2	MOSS/A GRADE 1	MOSS/A SCORE 0
166	96.1	96.6	98.0	98.1	97.8	98.0	98.2	97.9	97.4	97.8	97.4	97.9	97.9	97.1	97.1	97.4	50.0	25.0	5.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
167	97.4	97.6	99.6	98.4	98.4	99.2	98.2	94.3	98.4	98.1	97.0	97.8	97.2	97.4	98.1	97.9	-	-	-	P	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
168	96.8	96.4	99.6	99.5	97.5	97.9	97.6	97.1	97.4	96.9	96.8	96.8	96.9	97.1	97.9	97.8	50.0	20.0	5.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
169	95.1	95.6	97.9	97.8	98.2	98.1	97.4	97.8	97.6	97.6	97.1	96.2	96.1	96.0	96.0	96.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
170	96.8	96.9	98.0	98.3	98.4	98.6	98.8	98.9	97.5	97.4	97.2	97.0	97.5	97.6	97.6	97.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
171	97.2	97.2	98.0	98.1	98.2	98.3	98.4	98.5	98.6	98.8	98.9	98.5	98.0	97.9	97.7	97.5	-	25.0	5.0	-	-	-	-	P	-	-	P	-	-	-	P	-	-	-	-	-
172	96.4	96.2	98.5	98.1	98.6	98.4	97.8	97.9	97.4	97.8	97.0	96.0	96.2	95.9	95.5	96.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
173	96.4	96.2	98.5	98.1	98.6	98.4	97.8	97.9	97.4	97.2	97.4	97.8	97.6	95.9	95.5	96.6	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
174	96.8	96.4	96.2	95.1	94.4	94.8	94.6	95.2	94.4	95.1	95.2	94.5	94.2	95.2	94.4	94.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
175	98.0	98.4	99.1	98.4	96.7	96.9	97.2	97.4	98.0	98.1	98.4	97.9	97.8	97.2	97.4	98.1	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
176	95.6	95.1	98.1	98.0	98.4	98.2	98.2	98.4	98.2	98.0	97.4	97.0	96.8	96.9	96.1	95.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
177	96.4	96.2	98.5	98.1	98.6	98.4	97.8	97.9	97.4	97.8	97.0	96.0	96.2	95.9	95.5	96.6	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
178	96.1	96.4	98.1	98.0	98.4	98.2	98.4	98.0	97.4	97.6	97.4	97.2	97.2	97.1	97.0	96.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
179	97.4	97.5	98.1	98.0	97.0	96.4	96.9	97.2	97.7	97.8	97.9	98.0	98.1	98.2	98.2	98.3	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
180	96.8	96.4	97.5	97.6	97.9	97.1	97.4	96.4	96.8	96.8	96.9	97.1	97.1	97.9	97.2	97.5	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
181	96.9	97.0	98.0	98.1	98.3	98.4	98.2	97.9	97.7	97.5	97.4	97.0	97.5	97.7	97.8	98.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
182	96.9	97.1	99.0	98.5	98.1	97.9	98.1	98.0	97.8	97.7	97.4	97.1	97.4	97.9	97.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
183	97.3	97.1	98.0	98.2	98.1	98.4	98.0	97.9	97.7	97.5	97.2	97.7	97.9	98.1	98.2	98.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
184	96.8	96.4	97.6	97.6	96.8	96.0	96.4	96.9	96.8	96.8	96.9	97.1	97.9	97.8	97.2	97.5	-	45.0	5.0	-	P	P	-	P	-	-	P	-	-	-	P	-	-	-	-	-
185	96.6	96.5	98.0	98.3	98.0	97.9	97.8	96.8	96.9	97.1	97.2	97.4	97.5	97.8	97.8	97.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
186	96.9	97.0	98.0	98.3	98.2	98.0	97.9	97.5	97.4	97.4	97.2	97.3	97.4	97.5	97.7	97.8	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
187	96.7	96.8	98.0	98.3	98.0	98.1	97.9	97.8	97.5	97.4	97.2	97.2	97.7	97.9	98.0	98.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
188	96.0	96.1	98.0	98.1	97.9	98.0	98.0	97.8	97.9	97.1	96.8	96.2	96.1	96.0	96.4	97.0	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
189	96.6	96.9	98.1	98.1	98.0	98.4	98.4	98.2	97.9	97.4	97.4	97.9	97.8	97.8	97.6	97.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
190	96.2	96.2	98.2	98.0	96.8	97.2	97.8	97.7	97.4	97.0	96.9	96.2	96.4	95.1	96.6	96.8	50.0	22.0	5.0	-	P	P	-	P	-	-	-	P	-	-	P	-	-	-	-	-
191	96.0	96.4	98.0	98.1	98.0	97.2	97.4	97.8	97.6	97.4	97.4	97.0	97.1	97.0	96.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
192	96.0	96.2	97.8	97.7	97.8	97.4	97.2	96.8	97.0	96.9	96.2	96.4	95.1	96.6	96.8	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
193	97.1	97.0	99.0	98.5	98.1	97.9	98.1	98.0	97.8	97.7	97.4	97.1	97.4	97.9	97.8	97.2	50	15.0	4.0	-	-	-	-	P	-	-	P	-	-	-	P	-	-	-	-	-
194	97.0	96.8	99.0	98.5	96.8	97.9	98.1	98.1	98.0	98.6	98.4	97.8	98.0	97.9	97.8	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
195	96.8	96.9	98.8	98.6	98.2	98.0	97.9	97.8	97.8	97.4	97.8	98.0	98.4	97.9	97.4	97.1	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
196	96.9	96.9	98.1	98.6	98.2	98.0	97.9	97.8	97.9	97.4	97.8	98.0	98.4	97.9	97.4	97.1	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
197	95.6	95.8	99.6	98.6	98.4	98.4	98.2	98.5	97.5	97.4	96.6	97.3	96.0	96.4	96.8	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
198	97.4	96.8	97.6	98.0	97.9	97.8	97.6	97.4	97.0	96.9	96.0	96.2	97.2	97.0	97.1	96.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
199	97.0	97.2	96.8	96.7	97.0	97.4	97.2	97.0	96.4	96.2	96.0	96.4	96.2	96.8	97.0	97.2	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
200	96.6	96.4	96.6	96.8	97.0	96.2	96.0	96.0	95.6	95.2	94.8	94.2	94.0	96.6	96.4	95.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
201	96.6	96.7	96.1	95.7	95.5	93.9	94.1	94.8	95.0	95.2	95.5	94.9	94.6	95.1	94.8	91.9	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
202	96.4	96.2	96.8	96.9	97.9	97.9	98.0	97.8	97.9	96.8	96.8	96.9	97.0	97.0	99.2	97.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
203	96.0	96.1	97.6	97.0	97.8	97.6	97.6	98.0	98.1	98.0	97.8	97.6	97.4	97.8	97.6	97.4	-	-	-	-	P	P	-	-	-	-	-	-	-	-	P	-	-	-	-	-
204	96.9	94.8	98.1	99.4	99.0	98.4	98.2	98.5	98.5	98.4	98.0	97.5	97.9	97.4	96.6	96.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
205	96.6	96.4	98.4	98.0	98.1	97.8	97.9	98.0	98.1	87.8	96.9	96.8	96.9	96.8	97.0	97.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
206	96.3	96.4	98.1	98.0	97.9	97.8	97.8	97.4	97.6	97.2	97.4	97.8	97.6	98.1	97.2	97.0	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
207	96.0	96.6	97.4	93.2	97.1	96.0	96.2	96.4	96.1	94.1	92.6	94.8	95.0	95.8	95.2	95.6	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
208	97.0	97.2	97.6	97.9	96.2	97.8	98.6	99.0	97.9	96.8	98.0	98.1	98.0	97.9	97.8	97.9	50.0	15.0	6.0	-	-	-	-	P	-	-	-	P	-	-	P	-	-	-	-	-
209	97.1	97.4	97.9	97.6	98.1	98.6	97.8	99.4	98.9	97.8	97.4	97.9	97.8	97.8	97.6	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-
210	96.9	97.2	96.6	95.8	96.8	96.9	97.8	97.2	98.0	97.0	97.3	96.8	96.3	96.0	95.6	95.8	-	-	-	-	-	-	P	-	-	-	-	-	-	-	P	-	-	-	-	-

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The Principal,
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Subject: **Approval of Plan of Thesis.**

This is to inform you that the Faculty of Medical Sciences in its meeting held on 29.10.2021 has approved the plan of thesis of **Deepshikha**, a student of your college for **MD Anaesthesiology** along with the names of Supervisor/Co-Supervisor as under:-

Topic Plan of Thesis

Comparison of efficacy of ondansetron and palonosetron for prevention of post spinal shivering during lower limb surgeries.

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The student has to submit the four copies of thesis (along with PDF format) , to the Controller of Examinations, BFUHS, Faridkot, at least six months before the commencement of theory examination, if he/she is otherwise eligible to take the examination. He /She must directed to attach a photocopy of this letter with the forwarding letter while submitting thesis to the University along with the letter of approval of University for change of supervisor/Co-Supervisor, change of topic,(if any).

Dr. S P Singh MS(Oph)
Controller of Examinations

Note :

11. *If any discrepancy found regarding topic of thesis or Supervisor/Co-Supervisor, inform undersigned within one month after issue of this letter.*
12. *The student may submit the thesis as per the schedule already conveyed i.e for May/June examination 30th Nov of the preceding the year of examination and for Nov/Dec examinations 31st May of the year of examination.*

COMPARISON OF EFFICACY OF ONDANSETRON AND PALONOSETRON FOR PREVENTION OF POST SPINAL SHIVERING DURING LOWER LIMB SURGERIES

THESIS PROPOSAL

FOR APPROVAL OF SUBJECT OF THESIS TO BE SUBMITTED

IN PARTIAL FULFILMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

DOCTOR OF MEDICINE

In

ANAESTHESIOLOGY

OF THE

BABA FARID UNIVERSITY OF HEALTH SCIENCES

FARIDKOT

FEBRUARY 2021

Dr Deepshikha

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ABSTRACT OF PLAN OF THESIS

Title	COMPARISON OF EFFICACY OF ONDANSETRON AND PALONOSETRON FOR PREVENTION OF POST SPINAL SHIVERING DURING LOWER LIMB SURGERIES
For the degree of	M.D. Anaesthesia
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Introduction: Shivering is a stressful complication after subarachnoid block leading to an increase in oxygen consumption and increased carbon dioxide production, increased chances of myocardial ischemia, infection, bleeding and various consequences. Recently, interest has been evinced in 5-HT3 receptor antagonists for prophylaxis of peri-operative shivering.

Aim of Study: The aim of the study is to compare the efficacy of prophylactic Ondansetron and Palonosetron in reducing the incidence and severity of post spinal shivering.

Materials & methods: A prospective, double blinded study will be conducted on 210 patients aged 18-60 years belonging to ASA grade 1-3, scheduled for elective lower limb surgeries. The patients will be randomly allocated to three groups of 70 each. Group A patients will receive Ondansetron 8mg, Group B patients will receive Palonosetron 75µg and Group C will receive normal saline (placebo) as iv injection 5 minutes before administration of spinal anesthesia. The hemodynamic parameters, core and peripheral body temperature will be monitored. Incidence and severity of shivering will be recorded peri-operatively and in PACU (postanesthesia care unit).

Clinical Significance: The advantage of 5-HT3 receptor antagonists is the minimal sedation, relative safety profile and simultaneous prophylaxis against post operative nausea and vomiting.

Keywords: Ondansetron, Palonosetron, Post-spinal Shivering

(Signature) Candidate	(Signature) Co-supervisor	(Signature) Supervisor	(Signature) Principal

CERTIFICATE OF FACILITIES AVAILABLE

This is to certify that the facilities for work on the subject of thesis titled **"COMPARISON OF EFFICACY OF ONDANSETRON AND PALONOSETRON FOR PREVENTION OF POST SPINAL SHIVERING DURING LOWER LIMB SURGERIES"** exist in the Department of Anaesthesiology at Dayanand Medical College and Hospital, Ludhiana and will be provided to the candidate. We will see that the data being included in the thesis are genuine and is collected by the candidate herself under our supervision and guidance.

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APPROVAL PROFORMA
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RESEARCH & ETHICAL COMMITTEE
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Dr. Sandeep Puri
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PROFORMA FOR REGISTRATION OF SUBJECT FOR DISSERTATION

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4	DATE OF ADMISSION OF COURSE	25THJULY,2020
5	TITLE OF THE TOPIC	COMPARISON OF EFFICACY OF ONDANSETRON AND PALONOSETRON FOR PREVENTION OF POST SPINAL SHIVERING DURING LOWER LIMB SURGERIES

6. BRIEF RESUME OF THE INTENDED WORK

6.1 NEED FOR THE STUDY

Shivering is a common complication after subarachnoid block with a reported incidence of 40 to 50%.[1] Shivering not only causes psychological stress to the patient but also physiologically leads to an increase in oxygen consumption by 200%–600% and increased carbon dioxide production leading to hypoxemia and lactic acidosis. It may also result in complications like increased chances of myocardial ischemia, infection, increased intraocular pressure, intracranial pressure and interferes with patient monitoring such as electrocardiogram (ECG), noninvasive blood pressure (NIBP), and peripheral oxygen saturation (SpO_2).[2,3]

The etiology of shivering is not clearly understood. The mechanisms chiefly responsible for shivering in patients undergoing surgery are intraoperative heat loss, increased sympathetic tone, pain, and systemic release of pyrogens.[4] Various pharmacological and non-pharmacological methods have been employed for prophylaxis of peri-operative shivering.[5]

Non pharmacological methods like pre-warming and forced warm air are effective but difficult to implement. Pharmacological agents used for this purpose include pethidine, tramadol, clonidine, and ketamine.[6] These agents, however, have the potential to cause excessive sedation and post operative nausea, vomiting.[6] Recently, 5-HT3 receptor antagonists have been found to be effective in reducing the incidence of peri-operative shivering. The advantage of 5-HT3 antagonists is the minimal sedation, relative safety profile and simultaneous prophylaxis against post operative nausea and vomiting.[7]

The commonly used 5-HT3 antagonists include Ondansetron and Palonosetron. These agents differ from each other by their relative potency and duration of action.[8] These agents have been individually used for prevention of post operative shivering.[9] Time of onset of action for Ondansetron is 30 minutes and it’s elimination half life is 3-4 hours with predominantly hepatic metabolism. The most commonly

reported adverse effects associated with use of Ondansetron are headache and diarrhoea. Uncommon side effects like cardiac arrhythmias, conduction disturbances (atrioventricular block) and prolongation of the QTc interval have been reported after the IV administration of Ondansetron.[10] Ondansetron has been most widely evaluated for peri-operative shivering and its efficacy found to be comparable to that of pethidine.[9]

Palonosetron is a second-generation 5-HT3 receptor antagonist with a prolonged duration of action and higher receptor binding affinity than first-generation agents (ondansetron). The mean terminal elimination half-life, following single intravenous (IV) dose, is approximately 40 hours. Palonosetron is eliminated from the body through both renal excretion and metabolic pathways(CYP2D6). The common side effects are headache and constipation. Rare adverse effects include bradycardia and QTc prolongation(<1%).

A trial conducted recently to study the efficacy of Palonosetron could not elucidate the anti-shivering effect of Palonosetron following general anesthesia.[11] The study, however, had certain limitations, it was conducted on specific population (elderly age group) and included specific surgery (laparoscopic cholecystectomy). This patient population has less incidence of shivering anyway whose results can't be extrapolated to general population. Very few studies are available on the efficacy of Palonosetron as prophylaxis for prevention of post spinal shivering. Hence, there is a need to study the efficacy of Palonosetron as prophylaxis for post spinal shivering.

Thus, the relative efficacy of the available 5-HT3 antagonists needs to be evaluated for prevention of peri-operative shivering. The present study is, therefore, designed to compare the efficacy of well established drug Ondansetron with a newer drug Palonosetron for prophylaxis of post spinal shivering in patients undergoing lower limb surgery under spinal anesthesia.

6.2REVIEW OF LITERATURE

Spinal anaesthesia is a commonly used technique in both elective and emergency surgeries. Shivering is one of the most commonly encountered problems during perioperative period. It is reported in 40%-50% of the patients undergoing surgical operation under spinal anaesthesia.[1]

Though the mechanism of origin of shivering is not clear, but the probable mechanisms could be decrease in core body temperature secondary to sympathetic block; peripheral vasodilation; increased cutaneous blood flow, which leads to increased heat loss through skin; cold temperature of operation theatres; rapid infusion of cold IV fluids and effect of cold anaesthetic drugs upon thermosensitive receptors in the spinal cord.[12] The process of anaesthesia and surgery attenuates normal homeostatic thermoregulation resulting in reduced vasoconstriction & shivering threshold.[13] All the above factors combined predispose patients to post spinal shivering.

The normal temperature regulation is controlled by the hypothalamus. It has two centres for temperature regulation, the preoptic nuclei of anterior hypothalamus which is sensitive to changes in local temperature of the blood flowing through the area from the internal carotid artery and a posterior center, which is sensitive to signals from peripheral temperature receptors brought via afferent pathways.[2] The sensing organs for temperature regulation are situated near the skin surface. Afferent impulses from these receptors pass via the spinothalamic tracts to reach the hypothalamus. The efferent impulses cause peripheral vasoconstriction thus preserving body heat.[2] The efferent impulses also facilitates thermogenesis by causing an increase in muscle tone and shivering. Shivering is elicited when the preoptic region of the hypothalamus is cooled. Efferent signals mediating shivering descend in the medial forebrain bundle. Spinal alpha motor neurons and their axons are the final common pathway for both coordinated movement and shivering.[14]

Shivering is very unpleasant, physiologically stressful for the patient undergoing surgery and some patients find the accompanying cold sensation to be worse than surgical pain. Post spinal shivering presents with different degrees ranging from piloerection in the mild form up to generalized skeletal muscle contraction. This involuntary, oscillatory muscular activity augments heat production.

Though shivering occurs as a thermoregulatory response to hypothermia but it also increases oxygen consumption by 400-500%. Shivering can thus result in oxygen debt and predispose the patient to lactic acidosis.[2] Shivering may be associated with increased adrenergic and sympathetic hyperactivity and subsequent organ dysfunction such as myocardial ischemia.[2] These increase in metabolic requirement also might predispose to difficulties in patients with existing intrapulmonary shunts, fixed cardiac output, or limited respiratory reserve.

Thus, prophylaxis and management of shivering assumes great importance. For prevention and appropriate management of shivering, perioperative temperature measurement is highly desirable. For the purpose of heat distribution in the body, it is divided into two thermal compartment, core and peripheral tissue. To document thermal balance adequately, it is necessary to record both core and peripheral temperatures. Site chosen must be accessible during surgery, convenient, safe and reliable. Various sites of temperature measurement are available- Oesophagus, nasopharynx, rectum, forehead, bladder, tympanic membrane, oral cavity, axilla, muscle, blood, skin surface.[15]

Various pharmacological and non-pharmacological interventions are used for management of perioperative shivering. Non-pharmacological methods include pre- warming, warm IV fluid administration, forced air warming devices and keeping the patient covered all the times. Despite the use of non-pharmacological measures, hypothermia and shivering

in peri-operative period is still common, necessitating pharmacological intervention.[5]

Various pharmacological agents have been tried for this purpose include Pethidine, Tramadol, Clonidine and Dexmedetomidine. However, almost all these agents cause sedation as an adverse effect, which can interfere with patient's evaluation in post operative period and has the potential to delay discharge from Post Anesthesia Care Unit (PACU).[16]

Recent research has shown the presence of 5-HT3 receptors in pre-optic part of anterior hypothalamus. Felberg and Meyers proposed a monoamine thermoregulation theory, according to which, Serotonin (5-Hydroxytryptamine), a biological amine found in brain and spinal cord, plays a part in the neurotransmission of shivering. Serotonin antagonism seems to lower the human thermal set range, thereby reducing metabolic cold defences and discomfort associated with post anaesthetic hypothermia. Various other studies have also suggested the role of serotonergic system in the pathogenesis of perioperative shivering.[2,17] Thus interest have been evinced in 5-HT3 antagonists, which have been widely used for the prophylaxis and treatment of perioperative nausea and vomiting. These drugs are easily available, have few adverse effects and cause little or no sedation.

According to meta-analysis by Zhou C, 5HT3 receptor antagonists appear to prevent postoperative shivering, with a broadly comparable efficacy to Meperidine.[9]

Nallam et al in 2017, conducted a study on 80 full term parturient and evaluated Ondansetron 8mg intravenously versus placebo (normal saline) for prophylaxis of perioperative shivering and found that it significantly reduced the incidence of shivering in patients undergoing caesarean delivery under spinal anaesthesia.[1]

Similarly, Kelsaka et al in 2006 conducted a study on 75 patients randomized to 3 groups, Group O (Ondansetron 8 mg), Group M

(Meperidine 0.4mg/kg) and Group C (control). Incidence of shivering was 8% in Groups O, M and 36% in Group C; and found that 8 mg Ondansetron is effective to reduce the incidence of shivering in patients undergoing spinal anesthesia.[18]

Based on the meta-analysis by Tie et al, in 2014, effect of Ondansetron on postoperative shiveringwhen compared with placebo, Ondansetron decreased the extend of postoperative shivering from 49.3% to 23.4%.[17]

A study conducted in 2010, by Shakya et al on 120 patients, who underwent lower abdominal surgeries under spinal anaesthesia. The patients were randomly divided in 3 groups of 40each who received Ketamine 0.25mg/kg or Ondansetron 4mg IV or Saline. Incidence of shivering found to be 42.5% in saline group compared to only 10% in Ondansetron group and 2.5% in Ketamine group.[19]

A dose finding study by Powell and Buggy in 2000, on 82 patients compared 2 doses of Ondansetron (4mg vs 8mg) with placebo for the prevention of shivering under general anaesthesia and found that 8 mg Ondansetron was more effective than 4 mg in reducing the incidence of shivering.[20]

A study was conducted in 2018, by Sharma et al, on 70 patients scheduled for various surgeries under spinal anaesthesia. The patients were randomly divided into two groups of 35 each to receive either saline or Ondansetron 8mg. Incidence of shivering was found to be 45.7% in saline group, 11.3% in Ondansetron group and concluded that prophylactic administration of Ondansetron significantly reduced shivering in patients undergoing spinal anaesthesia.[21]

Palonosetron and Ondansetron have similar mechanism of action. Palonosetron offers the advantage of requirement of single dosing due to its long half life of 40 hours. However, Youn et al found that the incidence of shivering in patients who received Palonosetron was no different from those who received no prophylaxis.[11] This was an

unexpected finding since Palonosetron and Ondansetron have a similar mechanism of action. Palonosetron being longer acting than Ondansetron. In addition, Granisetron which is a drug belonging to same class of drugs with action on 5HT3 receptor has also been reported to have significant anti-shivering effects.[22,23]

6.3 AIMS AND OBJECTIVES OF THE STUDY

- To compare the efficacy of prophylactic Ondansetron and Palonosetron in reducing the incidence and severity of post spinal shivering.
- To study hemodynamic changes and adverse effects, if any.

7. MATERIALS AND METHODS

7.1 SOURCE OF DATA

The study will be conducted in a randomized double-blinded manner in the department of Anaesthesiology, Dayanand Medical College and Hospital, Ludhiana after approval from the hospital ethics committee.

7.2 METHOD OF COLLECTION OF DATA

Inclusion Criteria

210 patients of either sex, aged 18 to 60 years belonging to American Society of Anaesthesiologists (ASA) grade 1-3, scheduled for elective lower limb surgeries under spinal anaesthesia will be included in this prospective, randomized, double blinded study. A written informed consent will be obtained from all the patients.

A total of 210 patients enrolled for the study would be randomly allocated to either of the three groups.

Group A –70 patients will receive IV Ondansetron 8 mg, 5 minutes before spinal anaesthesia.

Group B –70 patients will receive IV Palonosetron 75 µg, 5 minutes before spinal anaesthesia.

Group C –70 patients will receive IV Normal saline(placebo), 5 minutes before spinal anaesthesia.

Exclusion Criterion

- Failed spinal anaesthesia.
- Prolonged surgical time leading to supplement/ conversion to general anaesthesia.
- Coagulopathy PTI/INR >1.5 or platelet count less than 1 lakh/µL.
- Patient needing blood transfusion.
- Parkinson’s disease.
- Patient with known endocrine disease.
- Diabetic autonomic neuropathy.
- Patients having any dysarryrthmias on pre-operative ECG.
- Known hypersensitivity to any of the drugs used in the study.

PRE ANAESTHETIC CHECKUP

All patients will undergo a thorough pre-anaesthesia evaluation. Complete blood count (CBC), renal function tests, random blood

glucose levels, prothrombin time (PT), activated partial thromboplastin time (aPTT), ECG and Chest X-ray would be performed for all patients. A written informed consent will be obtained from all the patients.

ANAESTHESIA TECHNIQUE

All patients will be kept nil per orally for 8 hours prior to surgery and pre-medicated with Tab. alprazolam 0.5 mg administered orally at bed time on the night prior to surgery. In the operating room(OR), an intravenous (IV) access will be secured using 18 G or 20 G IV cannula. Standard monitoring in the form of Electrocardiogram (ECG), Non-invasive blood pressure (NIBP), oxygen saturation (SpO2) would be carried out.

Baseline hemodynamic parameters including heart rate (HR), systolic blood pressure (SBP), diastolic blood pressure(DBP), mean arterial pressure (MAP), respiratory rate (RR), oxygen saturation (SpO_2) and skin and core and peripheral temperature would be recorded. Peripheral temperature will be recorded from axilla, whereas core body temperature would be recorded from tympanic membrane using FDA approved infra red thermometer.

For all patients, the OR temperature will be recorded and maintained at 22± 1°C and constant humidity (60%). No means of active re-warming will be used as preventive measure. Patients will be covered with surgical drapes, chest and limbs of patient would be covered using cotton sheets. The intravenous fluids and irrigation fluids will be administered at room temperature.

The study drug will be administered intravenously 5 minutes before the administration of sub-arachnoid block as per random numbers. The study drug would be diluted to make a total volume of 10 ml and administered by an anaesthesia resident who would not participate further in the study. The anaesthesia resident observing the patient in OR or post anaesthesia care unit (PACU) would be blinded to the study drug administered.

Sub-arachnoid block (SAB) will be administered under all aseptic precautions using 3 ml of 0.5% heavy bupivacaine in sitting position, with a 26 gauge Quincke’s needle in L3-4 or L4-5 inter-vertebral space.

Following the block, patient would be placed in supine position. Level of sensory block would be assessed by loss of sensation to pinprick in the anterior axillary line. Highest level of sensory blockade would be taken as the level achieved 20 minutes after administration of intrathecal bupivacaine and this would be recorded. Duration of spinal anaesthesia would be defined as regression of sensory block to L1 dermatomal level.

All patients will be administered oxygen at rate of 5 litres/ minute via face mask. HR, SBP, DBP, MAP,SpO_2 and respiratory rate would be observed after placing the patients in supine position (0 minute) and every 5 minutes for the duration of surgery. Core and peripheral temperature would be measured every 30 min.

Any episode of bradycardia (defined as HR<50beats/min) will be treated with atropine 0.6mg IV.

Any episode of hypotension (defined as decrease in SBP <90 mm Hg or 20% less than baseline value) treated with ephedrine IV 6mg in titrated doses.

At the end of procedure, patients would be shifted to PACU, where they would be monitored every 30 minutes till 6 hours. Intra-operatively and in PACU, patients would be continuously observed for any episode of shivering, which would be graded as per Wrench.(Appendix Table 1)

Time of onset of shivering would be recorded. Patients suffering from shivering grade 1 or 2 will be managed by standard treatment which includes oxygen administration and a warming blanket. Patients suffering from shivering Grade 3 and 4 consistent for more than 15 minutes will be considered as ineffective prophylaxis and rescue drug Tramadol 50 mg IV bolus will be administered. If patient still complains of shivering after 20 minutes, a repeat dose of rescue drug Tramadol 50 mg iv will be given subject to a maximum of 200 mg in 6 hours. The anaesthetist will also record the time for disappearance of shivering after rescue treatment.

Adverse effects like nausea, vomiting, hypotension, bradycardia and sedation will be recorded.

Outcome:

Comparison of the efficacy of Ondansetron and Palonosetron for prophylaxis of peri-operative shivering under Spinal Anesthesia, in terms of incidence and severity of shivering, need for rescue treatment and any adverse effects.

STATISTICAL ANALYSIS

Data will be described in terms of range; mean ± standard deviation (± SD), median, frequencies (number of cases) and relative frequencies (percentages) as appropriate. Comparison of quantitative variables between the study groups will be done using ANOVA test. For comparing categorical data, Chi square ($\chi 2$) test will be performed and exact test was used when the expected frequency is less than 5. A probability value (p value) less than 0.05 will be considered statistically significant.

By using previous study [11] the incidence of shivering is 35% in placebo, 11% in Ondansetron and 21% in Palonosetron. Based on this assumption

The formula used in the situation is as under:

$$n = \frac{[Z_{1-\alpha/2}\sqrt{2P(1-P)} + Z_{1-\beta}.\sqrt{\{P1(1-P1) + P2(1-P2)\}}]^2}{(P1-P2)^2}$$

Where $P=(P1+P2)/2$

Approximate value of efficacy/cure rate for standard treatment =P1

Approximate value of efficacy/cure rate for other treatment = P2

Effect size = (P2-P1)

Level of significance (usually 5%)

$Z\alpha$ = Value of standard normal variate corresponding to α level of significance (1.96)

$Z\beta$ = The standard normal deviate for desired power(0.842)

With the above assumptions the sample size for 95% confidence level & 80% power works out 65 in each group.

7.3 DOES THE STUDY REQUIRE ANY INVESTIGATIONS OR INTERVENTIONS TO BE CONDUCTED ON PATIENTS OR OTHER HUMANS OR ANIMALS? IF SO, PLEASE DESCRIBE BRIEFLY.

No

7.4 HAS ETHICAL CLEARANCE BEEN OBTAINED FROM YOUR INSTITUTION IN CASE OF 7.3?

Attached along with.

LIST OF REFERENCES

1. Nallam S, Cherukuru K, Sateesh G. Efficacy Of Intravenous Ondansetron For Prevention Of Post spinal Shivering During Lower Segment Cesarean Section: A Double-Blinded Randomized Trial. Anesth Essays Res. 2017;11:508-13.
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PROFORMA

S.No	MRD NO.
Name	Randomization no.
Age / sex	
Diagnosis	Proposed Surgery
Weight	Height
ASA	Anesthesia start: Date/Time
Highest dermatomal level	Surgery start Date / time
Surgery finish Date/ time	Duration of Surgery
Duration of Anesthesia	Operating room temperature
Operating room humidity	Date/time of shifting to PACU

Signature of Candidate **Signature of Supervisor**

Intra-operative monitoring

Time (Min)	HR/min	SBP (mmHg)	DBP (mmHg)	MAP (mmHg)	RR/min	SpO2 (%)	Any remarks
Baseline							
0 (immediately after spinal)							
5							
10							
15							
20							
25							
30							
35							
40							
45							
50							
55							
60							
65							
70							
75							
80							
85							
90							
95							
100							
105							
110							
115							
120							
125							
130							
135							

Signature of Candidate

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140							
145							
150							
Vital monitoring in PACU							
180							
210							
240							
270							
300							
330							
360							

Temperature monitoring (in Fahrenheit)

Time (min)	Core body Temperature (Fahrenheit)	Peripheral temperature (Fahrenheit)	Sedation score (OAA)
0			
30			
1 hour			
1 hours 30 min			
2 hours			
2 hours 30 min			
3 hours			
3 hours 30 min			
4 hours			
4 hours 30 min			
5 hours			
5 hours 30 min			
6 hours			

Signature of Candidate **Signature of Supervisor**

Shivering

Time of onset of shivering (in min)	**Grade of shivering** (As per Wrench)	**Rescue Treatment administered**	**Time to disappearance of shivering** (in min)	**Need for repeat dose of rescue treatment**

Adverse effects	**Time of adverse effect**	**Treatment administered**
Bradycardia		
Hypotension		
Nausea/vomiting		
Dizziness		
Any other		

Signature of Candidate **Signature of Supervisor**

Appendix

Table 1

Wrench grade of shivering

Clinical Symptoms.	Grade
Without shivering.	0
Occurrence of one or more of the following: Piloerection, Peripheral vasoconstriction	1
Visible muscle activity limited to one muscle group.	2
Visible muscle activity more than one muscle group	3
Gross muscular activity involving the whole body	4

Table 2

Modified observers assesment of alertness sedation scale – MOSS A

Score	Responsiveness
6	Agitated
5	Responds readily to name spoken in normal tone
4	Lethargic response to name spoken in normal tone
3	Responds only after name is called loudly and / or repeatedly
2	Responds only after mild prodding or shaking
1	Does not respond after mild prodding or shaking
0	Does not respond to deep stimulus

Signature of Candidate **Signature of Supervisor**

INFORMED PATIENT CONSENT

Date: _____

I.....D/o, W/o, S/o..... .....am willing to participate in the study **"COMPARISON OF EFFICACY OF ONDANSETRON AND PALANOSETRON FOR PREVENTION OF POST SPINAL SHIVERING DURING LOWER LIMB SURGERIES"** The procedure with its complications has been explained to me in local vernacular language. I have fully understood that no special tests and extra expenditure in any form, merely for the purpose of thesis is being carried out. I am free to opt out the study any time without assigning any reason.

....

Signature of the Witness Signature of the patient

Name:

Signature of Supervisor **Signature of Candidate**

मरीज अनुमति फार्म

तिथि _____

मैं _____पत्नी/पुत्र/पुत्री _____ निवासी _____ इस शोधकार्य **"COMPARISON OF EFFICACY OF ONDANSETRON AND PALANOSETRON FOR PREVENTION OF POST SPINAL SHIVERING DURING LOWER LIMB SURGERIES"** में भाग लेने के लिए सहमत हूँ। मैं इस शोधकार्य में भाग लेने के लिए अपनी स्वेच्छा से तैयार हूँ। मैं पुष्टि करता/करती हूँ की यह स्वीकृति देने के लिए मुझे कोई आर्थिक प्रलोभन नहीं दिया गया और न ही दबाव डाला गया है। मुझे इस शोधकार्य का उद्देश्य स्पष्ट कर दिया गया है और मुझे यह विश्वास है की यह विज्ञान और मानवता के लाभ के लिए है। मुझे इस शोधकार्य में होने वाले जोखिम के बारे में समझा दिया गया है और मेरी समझ में यह जोखिम बहुत मामुली है।

मैं इस शोधकार्य में भाग लेने के सम्बन्ध में किसी भी समय अपनी अस्वीकृति व्यक्त कर सकता/सकती हूँ और मेरे अस्वीकृति व्यक्त करने का मेरे इलाज पर कोई प्रभाव नहीं पड़ेगा।

_____ _____

गवाह के हस्ताक्षर रोगी के हस्ताक्षर/अंगूठे का निशान

नाम: नाम:

_____

अन्वेषक के हस्ताक्षर

_____

विद्यार्थी के हस्ताक्षर

ਮਰੀਜ਼ ਰਜ਼ਾਮੰਦੀ ਫ਼ਾਰਮ

ਮਿਤੀ_____

ਮੈ_____ਪਤਨੀ/ਪੁੱਤਰ/ਪੁੱਤਰੀ_____ਵਾਸੀ

_____

"COMPARISON OF EFFICACY OF ONDANSETRON AND PALANOSETRON FOR PREVENTION OF POST SPINAL SHIVERING DURING LOWER LIMB SURGERIES" ਤੇ ਚਲ ਰਹੀ ਖੋਜ ਵਿਚ ਹਿੱਸਾ ਲੈਣ ਲਈ ਰਜ਼ਾਮੰਦ ਹਾਂ। ਇਸ ਖੋਜ ਕੰਮ ਵਿਚ ਹਿੱਸਾ ਲੈਣ ਲਈ ਮੈ ਆਪਣੀ ਮਰਜ਼ੀ ਨਾਲ ਤਿਆਰ ਹਾਂ। ਮੈ ਇਹ ਦਸਣਾ ਚਾਹੁੰਦਾ ਹਾਂ/ ਚਾਹੁੰਦੀ ਹਾਂ ਕੇ ਇਹ ਰਜ਼ਾਮੰਦੀ ਦੇਣ ਵਾਸਤੇ ਮੈਨੂ ਕਿਸੇ ਵੀ ਤਰਾਂ ਦਾ ਲੋਭ-ਲਾਲਚ ਨਹੀ ਦਿੱਤਾ ਗਿਆ ਅਤੇ ਨਾ ਹੀ ਕੋਈ ਦਬਾ ਪਾਇਆ ਗਿਆ ਹੈ। ਮੈਨੂ ਇਸ ਖੋਜ ਦਾ ਮਨੋਰਥ ਸਮਝਾ ਦਿੱਤਾ ਗਿਆ ਹੈ ਅਤੇ ਮੈਨੂ ਇਹ ਭਰੋਸਾ ਦਵਾਇਆ ਗਿਆ ਹੈ ਕੇ ਇਹ ਖੋਜ ਵਿਗਿਆਨ ਅਤੇ ਮਾਨਵਤਾ ਦੀ ਭਲਾਈ ਲਈ ਹੈ। ਮੈਨੂ ਇਸ ਖੋਜ ਵਿਚ ਹੋਣ ਵਾਲੇ ਖਤਰੇ ਬਾਰੇ ਸਮਝਾ ਦਿੱਤਾ ਗਿਆ ਹੈ ਅਤੇ ਮੈਨੂ ਇਹ ਯਕੀਨ ਹੈ ਕੇ ਇਹ ਖਤਰਾ ਬਹੁਤ ਮਾਮੂਲੀ ਹੈ। ਮੈਨੂ ਇਸ ਖੋਜ ਕੰਮ ਵਿਚ ਹਿੱਸਾ ਲੈਣ ਦਾ ਢੰਗ – ਤਰੀਕਾ ਸਮਝਾ ਦਿੱਤਾ ਗਿਆ ਹੈ।

ਮੈ ਇਸ ਖੋਜ ਕੰਮ ਵਿਚ ਹਿੱਸਾ ਲੈਣ ਬਾਰੇ ਆਪਣੀ ਰਜ਼ਾਮੰਦੀ ਕਿਸੇ ਵੀ ਸਮੇ ਵਾਪਸ ਲੈ ਸਕਦਾ ਹਾਂ/ ਸਕਦੀ ਹਾਂ ਅਤੇ ਮੇਰੀ ਰਜ਼ਾਮੰਦੀ ਵਾਪਸ ਲੈਣ ਦਾ ਮੇਰੇ ਇਲਾਜ ਤੇ ਕੋਈ ਅਸਰ ਨਹੀ ਹੋਵੇਗਾ।

_____ _____

ਗਵਾਹ ਦੇ ਹਸਤਾਖਰ ਮਰੀਜ਼ ਦੇ ਹਸਤਾਖਰ

ਮਿਤੀ_____ ਮਿਤੀ_____

ਪਤਾ _____ ਪਤਾ _____

_____

ਨਿਰੀਖਕ ਦੇ ਹਸਤਾਖਰ

_____

ਸਿਖਿਆਰਥੀ ਦੇ ਹਸਤਾਖਰ